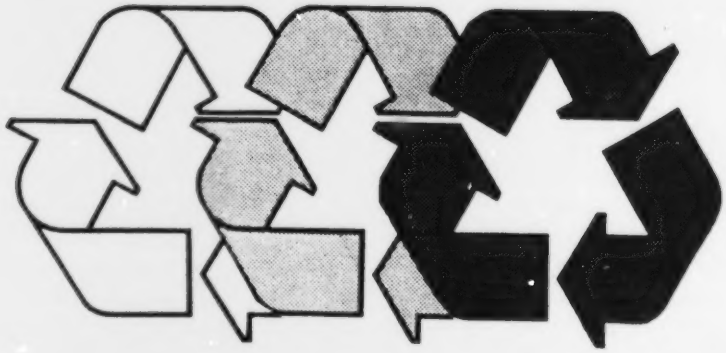
Conserving Our Future



A Draft Recycling Strategy for the 90's

For discussion at:

Conserving Our Future: A recycling strategy for the 90's
March 9 and 10, 1990 Fort Garry Hotel, Winnipeg

Recycling Action Committee

Manitoba Environment

90-04990/

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ABOUT THE TITLE OF THIS REPORT

CONSERVING OUR FUTURE:

A DRAFT RECYCLING STRATEGY FOR THE 90'S

This report is the Draft Action Plan of the Recycling Action Committee. It has been prepared to assist discussions at the Committee's conference, entitled: Conserving Our Future: A Recycling Strategy for the 90's, to be held March 9 & 10, 1990.

For registration information, please phone 257-3891.

PLEASE PLAN TO ATTEND, AND BRING THIS COPY OF THE REPORT ALONG WITH YOU.

To contact the Recycling Action Committee, or to respond to the Draft Action Plan, write to : Recycling Action Committee, 960 - 330 St. Mary Ave., Winnipeg, Manitoba, R3C 3Z5.

(Second Printing)

SUMMARY OF THE RECOMMENDATIONS

1: *That the Manitoba Government adopt the term " WASTE MINIMIZATION strategy" rather than a recycling strategy. WASTE MINIMIZATION acknowledges that Reduction and Reuse are preferable to Recycling.*

2: *That the Minister of Environment set a waste reduction goal of a 50% reduction of the 1988 per capita waste flows to landfills by January 1, 2000; and that specific targets be established for several major subcategories of waste.*

3: *That the Minister of Environment endorse the principle of a continuing goal to reduce waste in each subsequent decade.*

4: *That the Minister of Environment specify an interim goal of a 20% reduction of the 1988 per capita waste flows to landfills by January 1, 1995, with appropriate interim targets for several major subcategories.*

5: *That the Minister of Environment negotiate waste reduction targets with stakeholders in order to accomplish the interim and year 2000 waste reduction goals. The basis of negotiation is to be: the proportion of the product or material in the waste stream, the environmental significance of the waste product or material, consistency with national protocols and codes of practice, and the best available reduction, reuse, recycling or recovery technology. Consumer and worker health and safety are to be considered in establishing these targets.*

6: *That, if the Manitoba Government imposes targets, there should be automatic referral to an independent review body. The major test of the review should be the reasonableness of the targets.*

7: *That Manitoba Environment undertake province-wide analysis of waste entering the landfills to assist in setting the targets.*

8: *That the Minister of Environment issue an annual public report on progress made towards the waste reduction targets and goals.*

9: *That the Minister of Environment negotiate waste reduction targets for automotive tires, used motor oils and storage batteries to achieve an 80% waste reduction before June 1, 1992. Because of the nature of these products, the Committee suggests that recycling be the preferred method of achieving the target.*

10: *That the Minister of Environment negotiate waste reduction targets for disposable diapers to achieve an 80% reduction of the VOLUME of used diapers going into landfills by June 1, 1992. Because of the nature of this product, the Committee suggests that cloth diapers and diaper services be the preferred method of achieving this reduction. Consumer education, changes to Government procurement policy and changes to regulations concerning welfare, funding of day-cares, hospitals and other care facilities and social assistance payments may be necessary to achieve the goal.*

11: *That the Minister of Environment make negotiation of waste reduction targets with the newspaper publishing industry a priority. Interim targets or performance milestones should be set for June 1, 1993.*

12: *That the "4-R's" in the RAC mandate be expanded to the "6-R's", adding residual management and responsibility, for the purpose of implementing the waste minimization strategy.*

13: *That Manitoba Environment adopt the definition of source reduction proposed by The Council on Plastics and Packaging in the Environment and endorsed by the Consumers' Association of Canada: "a collection of activities and actions that, in combination or singularly, lead to a reduction in the quantity and/or toxicity of municipal solid waste. The activities leading to source reduction originate within all segments of industry, as well as individual consumers and government. However, source reduction takes place outside and separate from solid waste management processes, such as recycling incineration and landfilling. It is rather, a direct resource conservation measure."*

14: *That the Minister of Environment recommend to the Manitoba Round Table that WASTE MINIMIZATION and RECYCLING rather than Recycling and Waste Management be the topic of a substrategy component of its Sustainable Development Strategy.*

15: *That the Minister of Environment recommend that the Manitoba Round Table adopt the RAC Action Plan report as a substrategy report.*

16: *That prior to January 1, 1991 the Manitoba Government put in place a waste minimization strategy for products distributed in Manitoba. The minimum gross sales volume requiring a distributor's participation would be set at $100,000 per year. Distributors would file waste minimization action plans for each product with a volume over the threshold. The details for individual action plans would be negotiated as part of the waste reduction target negotiation.*

17: *That the Manitoba Government establish an incentive program to encourage early achievement of targets and milestones. The incentive would be permission to use a recognition format adopted and promoted by the government.*

18: *That the Manitoba Government establish appropriate pre-disposal levies for all products distributed in Manitoba for which waste reduction targets or milestones are not met. The levy would be scaled according to the level of non-performance and to the importance of the material in the waste stream.*

19: *That the Manitoba Government require distributors who have not filed waste minimization action plans by January 2, 1992 to post an appropriate performance bond. This bond would be forfeited if the distributor failed to meet interim waste reduction targets.*

20: *That Manitoba Environment, in co-operation with other stakeholders, ensure that a province-wide community outreach program be actively pursued.*

21: *That Manitoba Environment, in consultation with the Department of Education and interested organizations, develop materials and activities to be integrated into existing K-12 curricula, using waste minimization and recycling as examples of environmental and sustainable development issues.*

22: *That School Boards promote the adoption and implementation of waste minimization and recycling plans to demonstrate issues and options included in the school curricula.*

23: *That the Minister of Environment consult with the Minister of Education to ensure that the above training programs are provided.*

24: *That the Manitoba Government give the Interdepartmental Procurement Committee a continuing mandate to identify additional opportunities to purchase products made from recycled materials. The existence of this Committee and the procurement policy should be widely publicized.*

25: *That the Manitoba Government tender for recycling services on the same basis as it tenders for waste removal and disposal services.*

26: *That the Manitoba Government require the adoption of its procurement policy as a requirement for receiving any provincial funding above $100,000.*

27: *That all Provincial Crown Corporations be required to adopt the procurement policy specified above.*

28: *That the Federal and Provincial Governments put policies in place, and redirect funds, to encourage research and development in Manitoba into waste reduction with attendant increase in knowledge and expertise, and industrial potential in the area of environmental sustainability.*

29: *That the Manitoba Government designate an existing agency to coordinate the development of products and processes which could use secondary materials from Manitoba's waste stream.*

30: *That the Manitoba Government encourage Manitoba based manufacturers to include recycled materials in their products.*

31: *That the Manitoba Government support national initiatives to encourage the use of recycled materials in products, but not set minimum content criteria.*

32: *That the Manitoba Government investigate and implement a Provincial Sales Tax rebate for waste minimization equipment purchased and installed in Manitoba.*

33: *That Manitoba Environment review again the proposed Waste Disposal Ground regulations to ensure that they do not inhibit recycling.*

34: *That consolidation of Waste Disposal Grounds become a "principle of application" for the regulations and that Class III Waste Disposal Grounds be permitted only as an "exception to the regulations" by Manitoba Environment.*

35: *That Manitoba Environment provide technical assistance to municipalities covered by the Municipal Act to develop proposals for waste disposal ground consolidation including the provision of transfer stations and recycling depots.*

36: *That the Minister of Environment encourage municipalities to form waste minimization regions or districts.*

37: *That the Manitoba Government amend the Municipal Act and the City of Winnipeg Act, as necessary, to permit charging a fee for collection and handling of wastes on a volume related basis.*

38: *That the Manitoba Government actively encourage municipalities to levy charges for waste collection and handling on the basis of volume of waste generated rather than paying for this service through property taxes.*

39: *That Manitoba Environment should be given sufficient additional resources to properly implement the elements of this action plan.*

INTRODUCTION

In June of 1989 the Manitoba Minister of Environment, Honourable Glen Cummings, established the Manitoba Recycling Action Committee. Mr. Cummings requested the Committee to advise him on how the Province should meet the goal of a 50% reduction in solid waste generated in the province by the year 2000.

The major task of the Committee was to prepare a strategic action plan that applied the "4-R's" of waste minimization: Reduce, Reuse, Recycle and Recover. The Committee's full terms of reference are included as Appendix A.

The Manitoba Recycling Action Committee has fourteen members representing a broad spectrum of stakeholder interests. The complete membership of the Committee is listed in Appendix B.

PUBLIC CONSULTATION

The Minister's instruction called for broad consultation with both the general public and key stakeholders to work toward a consensus on the Committee's recommendations. With the publication of this Draft Action Plan, the Committee seeks further comment from the public and other stakeholders.

The Draft Action Plan makes a number of recommendations to the Minister concerning the development of a waste minimization strategy. Both the principles of the strategy and the details are open for public discussion.

The next major public activity of the Committee will be a conference to be held March 9 and 10 of this year at the Fort Garry Hotel in Winnipeg entitled "Conserving Our Future: A recycling strategy for the 90's". This conference is designed for the Committee to hear the opinions and suggestions of the public and stakeholders about the Draft Action Plan. The Conference will encourage general discussion of the broad aspects of the plan.

It will also include workshops designed to encourage participants to answer specific questions about elements of the plan. Twelve different workshops have been created. Each workshop will be held four times during the Conference. Notes of viewpoints will be kept at each workshop and broad conclusions reported to the general sessions.

The Committee will consider the suggestions and comments received at the Conference as we finalize the Action Plan report to the Minister. The final Action Plan report will be made public during Environment Week, June 3 - 9, 1990.

The Committee has already received considerable comments from the public. Since mid-October, committee members have attended numerous public meetings to discuss the background paper "Recycling: Now is the Time" and issues of waste minimization in general. Almost five hundred people looked at displays about waste and recycling and made the Committee aware of their concerns and priorities at the eight "Town Hall Meetings" sponsored by the Committee. Summaries of the discussions at the Town Hall Meetings, "Recycling: What you had to say" and the background paper are available from the Committee office. To obtain copies, please call 945-8443.

THE BASIC STRATEGY

The basic strategy of the Recycling Action Plan is to see that individuals and groups in society accept their responsibility for waste minimization. Government is responsible for minimizing its own waste and is accountable for ensuring that the rest of us accept our responsibilities.

The strategy presented in this report is designed to achieve the Minister's goal of a 50 per cent reduction of waste before 2000. This is defined as a 50% reduction in the per capita flow of waste to the landfill compared to the 1988 flow. The Committee recommends that waste reduction be made a continuing goal. The target reduction for 2010 per capita flow of waste to landfill would be established before the year 2000.

The distribution chain which markets a product is asked to accept the responsibility for waste minimization for that product. The responsibility is aimed at "the distributor of a product in Manitoba". This includes products manufactured outside the province, and yet sold here, as well as those manufactured here for sale in Manitoba. Manufacturers of products destined for sale outside the province would be responsible for the waste generated at the manufacturing stage only.

Wastes such as household yard wastes and wastes collected by government from parks and green spaces which are normally sent to a landfill will be the responsibility of the government collecting them.

The emphasis of the strategy has been broadened to waste minimization. It highlights the priority to be given to source reduction of waste and to reuse activities. Recycling is a valuable process for wastes that have not yet been reduced. However, recycling itself has financial and resource implications, and should be considered as one of the options for minimizing waste.

The strategy calls for each distribution chain to achieve a specific waste reduction target in order to contribute to the overall goal. Targets for individual product groups or materials will be negotiated between the distributor and the government. The strategy provides for the filing of waste minimization plans by individual firms and has provision for interim targets, incen-

tives, compliance evaluation and penalties. The distributor accepts responsibility to help meet the target by a combination of source reduction, reuse, recycling, recovery activities best suited to their product. The mix will be agreed upon in the waste minimization action plan filed with the Department of the Environment.

The focus on the year 2000 and the emphasis on responsibility of the distributor gives the plan a longer run view. Shorter run priorities can be addressed either by higher interim targets within the longer run plan or by special transitional arrangements. These could be replaced by the waste minimization plans as they are adopted.

The Draft Action Plan has been prepared by the Recycling Action Committee to serve as a focus for discussion at the Conserving Our Future Conference.

Chapters 1 to 8 represent a long-term strategy around which the Recycling Action Committee has reached a general consensus. It includes 39 recommendations. The Committee would like to hear your thoughts about these recommendations, at the Conference and by your sending in the attached work sheets.

Chapter 9 deals with important issues where the Committee has not yet achieved consensus. These issues have particular short-term implementation consequences and deal with grass-roots participation; coordination of approaches; and funding. It is the Committee's intent to formulate recommendations following consultation on the options that are presented and on other ideas discussed at the conference.

We are looking forward to hearing from you. If you can't attend, please send us the work sheet from the back of this draft strategy as soon as you can.

WASTE REDUCTION GOAL

BASIC GOAL

Manitoba's Minister of the Environment, Honorable Glen Cummings, has adopted a goal for Manitoba of a 50% reduction in solid waste by the year 2000. The Recycling Action Committee's strategy is designed to achieve that goal.

The Committee interprets this goal to mean that by January 1, 2000 the amount of waste generated per person in the province shall be 50% less than it was in 1988 - about 500 kilo's per person rather than the approximately 1000 kilo's per person at the present time. This includes municipal solid waste from all sources: residential, commercial, industrial and municipal. It includes materials from obsolete, broken or used-up products from the consumer, commercial and industrial sectors, yard wastes such as leaves, grass clippings and construction wastes such as building demolition wastes, construction materials and paving materials. The weight of materials discarded shall be the basis for the evaluation of the achievement of the goal.

The Committee's opinion is that waste reduction should continue beyond the year 2000, in the sense that a notional objective to continue waste reduction be set for the years beyond 2000. Conditions in the year 2000 will determine whether a different waste reduction goal is desirable for the year 2010. The important feature is to establish an on-going perspective so that waste reduction becomes an integral part of a sustainable development strategy for the province in which environmental and economic planning are truly integrated.

The goal presented above is consistent with goals being established in other Canadian provinces and in the United States. For instance, in January 1989 the Ontario Recycling Advisory Committee, in recommending a 50% reduction of the weight of Municipal Solid Waste disposed of by the year 2000, clarified the goal by saying:

> "establishment of any waste reduction goal should also be based upon a given base year, with adjustments made for population growth and quantities of materials already recovered from municipal solid waste for recycling."

As another example, Alameda County, California will place a proposal before voters in June 1990 which sets a goal for the year 2000 of a 50% reduction in the weight of materials otherwise discarded at landfills or incinerators. Waste reduction, recycling and composting activities will serve to reduce the amounts discarded at landfills and incinerators. This proposal is consistent with the California Integrated Waste Management Act of 1990.

The Committee's proposal reflects the need to adjust for population growth by adopting a goal based on per capita waste generation rates. The proposal makes no adjustment for present recycling efforts, such as our scrap metal industry which handles the equivalent of up to 30% of Manitoba's waste stream every year. We are not overlooking the significant activities presently under way in Manitoba. By focusing on the amount of waste generated per person, we do not need to make such adjustments to make our goal meaningful.

Many observers who have witnessed the promotional efforts for the "Blue-Box" residential curbside recycling programs in Ontario, Alberta and British Columbia as well as in several of the States will scoff at the thought that significant recycling is under way in Manitoba at the present time. The following box presents data on some of the recycling activities presently under way in the province. A more extensive list is present in the Appendix C.

SOME RECYCLING ACTIVITIES IN MANITOBA

Scrap Metal Industry

- approximatly 40 firms, more than 1,000 employed.
- between 200,000 and 300,000 tonnes processed every year.

Paper

- 3 paper mills consuming waste paper.
- 3 cellulose fibre insulation manufacturers.
- 7 firms shipping waste paper out-of-province.

Aluminum Beverage Cans

- several firms shipping to out-of-province processing plants.
- many firms operating buy-back centres including scrap metal dealers and Manitoba Soft Drink Recycling, as well as, deposit/return through beer vendors.

PET Plastic Beverage Containers

- shipped to out-of-province processors by M.S.D.R.
- several firms operate buy-back centres for these containers

Reducing waste makes sense for businesses and many Manitoba firms have reduced waste as a part of their business activities. For instance, several major packaging firms competing in international markets are located in Manitoba. These firms have reduced the thickness of their packaging materials and hence the weight of their packages. Such changes reduce the amount of materials consumed in packaging and also reduce the weight of materials to be discarded.

For example, one of these firms has already reduced the weight of packaging for a convenience food from 3.25 to 1.14 pounds for 1000 packaging units. Another example of weight reduction in packaging arises in the beverage industry. Over the last several years the number of aluminum beverage cans required to obtain credit for a pound weight of aluminum at the buy-back centres has risen from 24 to 30, an increase of 25%. The reduction in weight per can implied by this change again results in a reduction in the amount of resources consumed in the packaging and also in a reduction of the weight of material which potentially could become waste. These examples are intended only to show what can be done; not to show that we should be lackadaisical and rest on achievements to date.

The Committee's proposal moves the Province beyond a limited set of recycling objectives toward a waste minimization strategy. This advancement is very much in the forefront of thinking on the issue. For instance, a report prepared by consultants to the Solid Waste Management Division of the Metropolitan Toronto Department of Works in May 1988, outlines two distinct but compatible strategies for Metro Toronto -- a waste reduction strategy and a waste recycling strategy. These strategies are designed to move Metro beyond the existing curbside collection programs that are now under way in the region.

The report of The Ontario Recycling Advisory Committee, January 1989, includes a major section entitled, "Guiding Principles for Development of a Comprehensive Recycling Strategy". An important Guiding Principle is waste reduction and minimization. The report states:

> Ontario, like other jurisdictions throughout North America, is wrestling with some fundamental issues that must be addressed in the transition to higher order waste management practices. **Such a transition cannot be achieved simply by adding another level of collection service for a limited number of waste products that are currently considered to be recyclable.** (emphasis added)
>
> Developing a sustainable waste reduction strategy will require major shift in the beliefs and attitudes, as well as the waste management behaviour of both producers and consumers in the province. Responsible waste management services are an essential social mechanism and the cost of developing these services should be absorbed by all sectors. Changes may also be required

> in product design and manufacture to minimize waste. Local governments must institutionalize the practices of recycling as an integral component of the waste management services they provide. **And the Province must set the clear policy goals now required to support the further evolution of waste management in Ontario.** (emphasis added)

Thus, a **waste minimization strategy** in Manitoba would be called a **comprehensive recycling strategy** in Ontario.

Concern about minimizing waste is common across Canada, and most provinces are examining a change of policy in this area. Alberta recently adopted the goal of 50% waste reduction, although the excellent series of reports on recycling in Alberta prepared by the Alberta Environmental Council, including the last report issued in 1987 contained no quantitative goals for waste reduction. The report of the British Columbia Municipal Solid Waste Management Task Force, March 1989, called for that province to adopt Reduce, Reuse, Recycle, Recover and Residue management as its objectives. British Columbia, however, expressed its goals for municipal waste reduction solely in terms of recycling and composting. Again British Columbia has set no goal for activities which reduce waste at the generation source. Reducing waste at source, particularly for commercial and industrial wastes, will be important if the 50% goal is to be reached.

ACHIEVING GOALS

With waste minimization as the basis of our goal actual measurements may be taken to evaluate progress toward, and achievement of, the 50% reduction in waste. Measurements taken at the landfill gates can determine the per capita volume of materials being deposited there. If the volume approximates 500 kilo's per capita in 2000, the goals of the action plan will have been achieved. Additional information on municipal expenditures on litter control, the extent of illegal dumping and unlicensed dumping sites and so on will be useful. The major criterion for judging success will be the per capita volume of materials being landfilled.

A number of criteria presently being used in other jurisdictions to describe the success of recycling programs will not be appropriate for the Manitoba situation. Numbers of households participating in curbside collection, numbers of vehicles dropping materials off at collection depots, percentage of containers returned for deposit or bought back at redemption centres will be interesting descriptors of the process, but will not measure the success of the program.

By focusing on waste reduction goals and accomplishments, those held responsible will be able to choose among source reduction, reuse, recycling or recovery as the preferred methods of achieving the required reduction in

per capita waste generated. The chosen mix should represent the most effective method of achievement in terms of costs, impacts and diversion levels. Environmental monitoring and assessment of these activities will be important as they are for any other element of economic activity.

Important to remember is that the 50% waste reduction is a goal not a ceiling. Waste reduction is a major requirement for both economic efficiency and environmental efficiency and will be a major focus for a sustainable development strategy. A notional waste reduction goal for the subsequent decade will remind us to strive for additional waste reduction even if the 50% goal is reached before 2000.

RECOMMENDATION 1: That the Manitoba Government adopt the term " WASTE MINIMIZATION strategy" rather than a recycling strategy. WASTE MINIMIZATION acknowledges that Reduction and Reuse are preferable to Recycling.

RECOMMENDATION 2: That the Minister of Environment set a waste reduction goal of a 50% reduction of the 1988 per capita waste flows to landfills by January 1, 2000; and that specific targets be established for several major subcategories of waste.

RECOMMENDATION 3: That the Minister of Environment endorse the principle of a continuing goal to reduce waste in each subsequent decade.

INTERIM GOALS

The goal of a 50% reduction by the year 2000 will seem very distant and inadequate to environmental activists who desire immediate short term results. However, the changes being sought are major and fundamental revisions to the way in which Manitobans behave. In order to accomplish these revisions, changes must be made in existing infrastructure and facilities, new facilities must be built and indeed some new technologies will need to be developed.

There are risks in pushing ahead too quickly on the easily accomplished portions of the task, such as collection of recyclables, without first addressing some of the harder portions, such as developing new processing technologies and expanding markets for secondary materials. These risks are amply displayed in some of the curbside collection programs implemented in Canada and the United States which have overwhelmed the available markets with the volumes of material collected and in some cases contaminated the processing system with poor quality materials. The results have been additional cost, confusion and in some instances disillusion with the viability of recycling and waste reduction.

An interim goal for 1995 will provide some urgency to the process. It will encourage us to undertake steps that could have significant impact in the short-run while providing a measure of our progress toward the longer-term goal.

It could be reasonably argued that an interim goal that is somewhat higher or lower than 25% be established. Some observers will predict that many easy opportunities exist now to make significant reductions and that the harder gains will not be attempted until the end of the decade. These observers would then argue for a higher interim goal of perhaps 30%.

On the other hand, many observers will point to the logistical difficulties of getting a revised system in place and predict that implementation delays will occur. After the system is streamlined great strides can be made very quickly. Such observers might argue for an interim goal of 12%-15%.

The Committee agrees that an interim goal of a 20% reduction of the 1988 per capita waste levels by January 1, 1995 as reasonable. It encourages early activity while giving us time to develop the facilities required to accelerate our waste reduction achievements between 1995 and 2000. Interest groups are invited to comment on this draft interim goal.

RECOMMENDATION 4: That the Minister of Environment specify an interim goal of a 20% reduction of the 1988 per capita waste flows to landfills by January 1, 1995, with appropriate interim targets for several major subcategories.

WASTE REDUCTION TARGETS

This section discusses strategies and options for achieving waste reduction goals. We will have to establish specific waste reduction targets to allow us to plan activities. The Committee discussed setting targets on the following bases:

* for particular product groups or industries, e.g. food & beverage, paper products, automotive products;
* for specific materials, e.g. glass, office paper, plastics, metals;
* for some combination of materials and product groups.

Several options are available for the method by which these targets are established. Our first choice would be for the provincial government to consult and negotiate with stakeholders to obtain a joint protocol on the targets to be established. This is the procedure being followed at the national level in the creation of a National Packaging Protocol. It has also been used in the United States in establishing regional waste management objectives, for instance by the Council of Northeast Governors.

The alternatives would involve government decree, always an option if negotiations do not work, or self-declaration of targets by various interest groups. Numerous industry groups have already established their own targets to demonstrate their environmental citizenship. For instance, Consumers' Glass in Canada has set a target of 50% recycled bottle cullet in their feedstock by 2000. They have also adopted container weight reduction as a goal and are working to increase the 25% reduction in container weight already achieved. The plastics industry through the Society of the Plastics Industry of Canada and other trade organizations have adopted similar targets. Other industry groups have also initiated such procedures.

How would targets be set for individual products or materials? One way would be to base the target on the portion of that product or material in the present waste stream. The highest targets could be set for the largest components of the waste flow, which would hopefully lead to the earliest achievement of the goal, those products which are the greatest proportion of the waste would have the biggest targets. For example, if a material contributing only 5% of the waste flow reduced its contribution by 100%, only 5% improvement is obtained. In this case really significant effort would be required to contribute very little to the achievement of the goal.

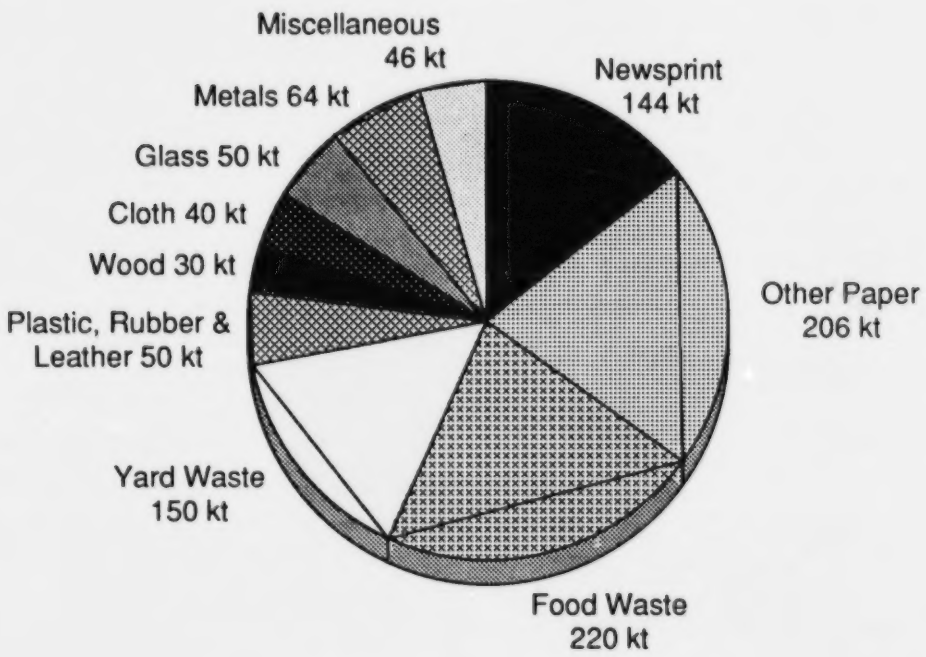
Some materials or products that are a small proportion of the waste stream may warrant high targets if they impose special costs on society either through their behaviour in the landfill or their contribution to litter problems or other characteristics. Car and truck tires, batteries, lubricating oils, fast food and beverage containers, disposable diapers, junk mail and advertising

flyers are commodities that will immediately come to the mind for many people.

Waste flow analysis is a specialized activity. Questions of how, when, where and how long to sample the flow of waste must be answered carefully if a meaningful waste flow analysis is to be constructed. Large scale waste flow analyses have not been conducted in Manitoba in recent years. The available data is obtained by adjusting the results of studies in other jurisdictions or by extrapolating from older analysis that have been done for Manitoba. The following chart shows an estimated 1988 waste flow for Manitoba based on the weights of the various materials. It has been adapted from data developed in Ontario.

MANITOBA'S SOLID WASTE (estimated)

1 kt = 1,000,000 kg



THE BASIS FOR ESTABLISHING TARGETS

One of the principles underlying the Committee's strategy is that the distribution chain for a product should carry the responsibility for reducing the waste generated by that product. The cost of achieving any reduction will be borne by members of the chain according to competitive forces within the chain. The distributor of the product will be the agent at whom responsibility is focused.

This principle suggests that waste reduction targets should be established by product or industry group.

PRODUCT OR INDUSTRY GROUP TARGETS

For instance, the food and beverage industry distribution chain would be responsible for waste elements including packaging, residual food wastes and wastes from their manufacturing operations. It seems reasonable to hold the industry responsible for post consumer packaging materials and for their internally generated wastes, over the whole range of materials they generate. Thus, the distributor of a can of soup, for example, would be responsible for achieving the waste reduction target not the distributor of the can.

Printing, publishing and paper converting industries would be responsible for the waste associated with production and consumption of their products which would be largely paper (many grades and types) but may also include plastic, adhesives and fabric. Products within this group could include newspapers, magazines, advertising flyers, envelopes, writing tablets, paper bags and paper wrapping.

For the purpose of obtaining public and stakeholder comments, TABLE 1 DRAFT TARGETS, illustrates a set of product or industry group waste reduction targets based on Standard Industrial Classifications. The Committee welcomes comments on these targets and will have a workshop on TARGETS at the Conserving Our Future Conference.

Targets would be applied to all wastes generated in connection with a product or industry group although special targets may be required for a specific material or product from that group. For instance used lubricating oils, rubber tires, and storage batteries from automobiles create special disposal problems. Disposable diapers from the Paper Products group also cause "disposal" problems. These products should be given high reduction targets and very short time periods to achieve the target.

TABLE 1 targets would apply to the entire waste flow from an industrial group, rather than for each and every element of the waste from that group. For instance, if metal containers made up 80% of a Food and Beverage

industry's waste and plastic containers only 20%, reducing metal container waste by 70% and plastic container waste by 2% achieves a 60% reduction. A combination of waste reduction techniques involving weight reduction, reuse, recycling or recovery of energy products might be used.

The contribution of the TABLE 1 targets to the goal of a 50% reduction is difficult to specify in detail at the present time. Glass, metals and plastic make up about 17 % of the Winnipeg waste flow to landfill. A 60% reduction of this entire flow would reduce the total by about 10%. Paper and Printed Materials also have a 60% target and make up about 40% of the waste flowing to Winnipeg's landfill. Achievement of this target would reduce the flow by an additional 25%. Yard wastes, Kitchen Waste and Other Compostables also have a 60% target and make up about 30% of the estimated waste going to landfill in Winnipeg. Achievement of this target would reduce the total by about 18%. Thus, in total our goal might be met by the TABLE 1 targets.

TABLE 1 DRAFT TARGETS:

Industrial or Product Groups, year 2000 targets

Pharmaceutical, Patent Medicines, Household Cleaning Compounds and Industrial Chemicals	(60 %)
Food and Beverage:	(60 %)
Paper, Printed and Published Materials:	(60 %)
Automotive, Construction, Forestry and Agricultural Equipment	(30 %)
Appliances, White Goods and Other Equipment:	(30 %)
Other Consumer and Wholesale Containers:	(60 %)
Clothing and Semi-durables:	(30 %)
Construction and Building Materials:	(40 %)
Yard Wastes, Kitchen Wastes and Other Compostables:	(60 %)

MATERIAL BASED TARGETS

An alternative is a materials based target system. Illustrative levels for various materials are provided in TABLE 2. The achievement of these targets would lead to an approximate 55% reduction of waste flowing to the landfill.

The waste reduction targets in both tables are illustrative, not suggested targets. Targets will need to be negotiated between the government and industry. In many cases new information will be required before detailed final targets can be set.

TABLE 2 DRAFT TARGETS: Material Groups, year 2000 targets	
Glass materials	(60 %)
Plastic materials	(50 %)
Paper materials	(60 %)
Rubber materials	(30 %)
Wood Materials	(20 %)
Metal Materials	(80 %)
Yard Wastes Kitchen Wastes and Other Compostables	(60 %)

RECOMMENDATION 5: That the Minister of Environment negotiate waste reduction targets with stakeholders in order to accomplish the interim and year 2000 waste reduction goals. The basis of negotiation is to be: the proportion of the product or material in the waste stream, the environmental significance of the waste product or material, consistency with national protocols and codes of practice, and the best available reduction, reuse, recycling or recovery technology. Consumer and worker health and safety are to be considered in establishing these targets.

In the event that government and stakeholders can not negotiate mutually agreed waste reduction targets, the government could impose targets. In this case, automatic referral to an independent review body to ensure the reasonableness of the targets should occur.

RECOMMENDATION 6: That, if the Manitoba Government imposes targets, there should be automatic referral to an independent review body. The major test of the review should be the reasonableness of the targets.

RECOMMENDATION 7: That Manitoba Environment undertake province-wide analysis of waste entering the landfills to assist in setting the targets.

RECOMMENDATION 8: That the Minister of Environment issue an annual public report on progress made towards the waste reduction targets and goals.

Given the special nature of automotive tires, lubricating oils, storage batteries and disposable diapers in the landfills, the Committee believes that very early action should be taken on these materials.

RECOMMENDATION 9: That the Minister of Environment negotiate waste reduction targets for automotive tires, used motor oils and storage batteries to achieve an 80% waste reduction before June 1, 1992. Because of the nature of these products, the Committee suggests that recycling be the preferred method of achieving the target.

RECOMMENDATION 10:That the Minister of Environment negotiate waste reduction targets for disposable diapers to achieve an 80% reduction of the VOLUME of used diapers going into landfills by June 1, 1992. Because of the nature of this product, the Committee suggests that cloth diapers and diaper services be the preferred method of achieving this reduction. Consumer education, changes to Government procurement policy and changes to regulations concerning welfare, funding of day-cares, hospitals and other care facilities and social assistance payments may be necessary to achieve the goal.

Newspapers are a major component of the waste stream and one which received substantial discussion at the Committee's Town Hall meetings. Potential markets for recycled fibre are also relatively close at hand. For these reasons, the Committee believes that newspapers also should be given priority.

RECOMMENDATION 11:That the Minister of Environment make negotiation of waste reduction targets with the newspaper publishing industry a priority. Interim targets or performance milestones should be set for June 1, 1993.

PRINCIPLES UNDERLYING THE WASTE MINIMIZATION STRATEGY

The principles under which the waste minimization strategy has been developed are: the 6-R's of Waste Minimization, Sustainable Development and Shared Responsibility. These principles interact to form the basis of the plan and are as critical to its success as the individual details.

THE 6-R'S OF WASTE MINIMIZATION

The 6-R's of waste minimization are the familiar Reduce, Reuse, Recycle and Recover activities,with the addition of Residual management activities and a final "R" of Responsibility. Even though these terms are familiar to many, they are frequently misinterpreted. Additional discussion is useful.

SOURCE REDUCTION TO MINIMIZE WASTE

Waste is a fundamental feature of our life. Waste material and energy have such low quality that they can not be used to run any process. The laws of nature tell us that all material and energy will eventually become waste. Using material or energy accelerates the creation of waste. Careless use makes waste very rapidly; while careful use and maintenance makes waste less rapidly. The speed at which waste is made can be controlled but the creation of waste can not be stopped.

Adopting a strategy to achieve source reduction of waste implies changing our use of materials so that the becoming of waste is slowed. Some of the elements of a source reduction strategy involve the way we make products: lighter, more durable; some involve the way we use products: more emphasis on maintenance and care; some involve the products we use: fewer disposable products. Some trade-offs among these options can be undertaken: lightness can be traded-off against disposability for example.

A definition of source reduction has been proposed in a study carried out for the Council on Plastics and Packaging in the Environment. Source reduction is defined as "a collection of activities and actions that, in combination or singularly, lead to a reduction in the quantity and/or toxicity of municipal solid waste". The definition is expanded by adding "the activities leading to source reduction originate within all segments of industry, as well as individ-

ual consumers and government. However, source reduction takes place outside and separate from recycling, incineration and landfilling. It is rather, a direct conservation measure."

REUSE OF GOODS TO MINIMIZE WASTE

The perspective on reuse of goods varies from generation to generation. Those with long experience in life will recall the neighbourhood milkman delivering and collecting milk bottles from the house. Soft drinks in deposit-return bottles will be a memory of a younger generation. Deposit-return beer bottles continue in Manitoba, as do some soft drink beverage bottles.

The issue is broader than the deposit-return system for beverage containers however. Commercial containers and pallets also provide extensive opportunities for reuse of materials and goods, as do second-hand and swap shops for items such as children's sporting goods, records and books. Even the now ubiquitous video rental store are involved in a reuse activity.

Reuse can substitute for source reduction in some cases or serve to complement it. Diaper services and in the home cloth diapers certainly replace disposable diapers and provide for source reduction of waste.

Obviously reuse opportunities must be pursued only to the point of care and common sense in cases where public health and safety are concerned. The risk of shattering glass bottles makes some use of deposit-for-return glass beverage containers unwise. Issues of possible product contamination through reuse of a contaminated container also need careful examination.

Reuse can contribute in a significant way to achieving some waste reduction targets. Those responsible under the waste minimization strategy for meeting those targets will want to use these techniques as appropriate.

RECYCLING TO MINIMIZE WASTE

As described in the Committee's background paper "Recycling: Now is the time!", recycling is the process by which materials are diverted from the waste stream and reprocessed to produce secondary materials. These materials once again enter the production cycle for consumer and industrial goods. A recycled material can flow back into the same use as it started or can be reprocessed into other goods requiring the same or similar materials.

Recycling slows the process of becoming waste. For instance, yesterday's newspaper contains old news which may not be useful. However, the residual paper is useful if treated carefully and used as a manufacturing input before it becomes waste.

A key issue in recycling is the quality of the secondary materials that can be diverted from the waste stream. The highest quality secondary materials are

diverted by the process of source separation before they become mixed with other waste products. These materials will have the least possible contamination and have the greatest ability to substitute for virgin materials in the production cycle.

The initial design of a product has a large influence on its recyclability. Products composed of several materials are more expensive to recycle than products made of a single material. This greater expense could limit the ability to recycle such a product in a small market like Manitoba. Thus the concept of "design for recycling" is very important.

The recyclability of a specialized material or commodity in Manitoba can also be limited by our small market size. A specialized material perhaps can be recycled only back to its original use. If a product is not capable of being recycled here, it must be shipped to a distant market at some expense.

In these cases, we might have to trade-off recyclability against some other objective: durability for source reduction or reuse, perceived convenience at some cost or the cost of landfilling the residual.

RECOVERY OF ENERGY TO MINIMIZE WASTE

Our significant hydro-electric resources not-with-standing, Manitoba imports significant volumes of combustible fuels. In the Committee's view energy recovery from some waste sources to substitute for fossil fuels is appropriate in some cases. Energy recovery applications might be most suitable for northern locations in which shipment to recycling facilities is not feasible and in which conventional fossil fuels are very expensive. As with all other waste minimization techniques discussed in this plan, energy recovery from waste must be done in an environmentally appropriate fashion and will receive lower priority than the preceding R's; reduce, reuse and recycle.

Recovery of energy from waste occurs under two basic processes with several variations in terms of the actual combustion technology. In the first process, "mass burn" technology, mixed garbage is burned in a furnace and the energy is recovered as steam, producing process heat or motive power. Refuse trucks dump their load of waste into a pit and it is conveyed to a furnace. Secondary materials recovery for recycling can occur prior to incineration but frequently did not in early applications of this technology.

The second method is to burn a source-separated material such as rubber tires as fuel or a refuse derived fuel. Using this method, wastes are processed or segregated to provide a fuel of particular specified characteristics.

The Committee views the second method of energy recovery only as an acceptable part of a waste minimization strategy. Mass burning of mixed waste presents the incinerator operators with substantial control problems. The material can vary substantially from truck load to truck load, from day to day and from season to season. These variations cause fluctuation in the

optimal combustion conditions which can result in substantial emission of environmentally harmful substances. The burning of a consistent waste product of known composition permits the optimization of the combustion conditions in the same way as with the fossil fuels that are being replaced.

The Committee adds two caveats on this issue. First, energy recovery is a fourth priority in the waste minimization strategy. Source reduction, reuse and recycling all have priority over energy recovery. The recovery of energy from wastes not suitable for the higher priority techniques is acceptable subject to appropriate environmental safeguards. Second, energy recovery techniques used must be flexible in their fuelling capability. If a source reduction or recycling technique subsequently becomes viable for the waste fuel then utilization of the higher priority technique is desirable. We must not see a situation in Manitoba where the volume of waste to an energy recovery facility is guaranteed for the life of the bonds used to finance the facility. Such a situation makes a mockery of the priority given to source reduction, reuse and recycling.

Great controversy surrounds the use of energy recovery as a waste minimization tool. The Ontario Minister of Environment has ruled against the future use of energy recovery in the waste minimization strategy in that province. The Consumers' Association of Canada is presently considering whether to propose a national ban on projects to recover energy from the waste stream.

RESIDUALS MANAGEMENT

This "R" deals with the operation of landfills for the purposes of containing the wastes that can not be diverted by one of the earlier "R's". In thinking of "residuals management" rather than of "disposal" of wastes, we can see that procedures and even terminology need to change if they are to adapt to new times. Under the Environment Act, the provincial government must regulate "waste disposal grounds". As the garbologists and garbage archaeologists are making us aware, much of the material deposited in a landfill is not disposed of. It will still be there in 25 or 30 years and longer. If it was a nuisance when it was buried, it will probably be a nuisance when it is discovered -- thus the appropriateness of the term "municipal nuisance grounds".

Residuals include materials which are too contaminated for the other R's as well as wastes from recycling and energy recovery activities. For instance, there is a waste from recycling automobile hulks called "shredder fluff", which is equivalent to about 20% of the metal being recovered. There will also be ash residue from burning waste materials in an energy recovery plant. Managing these residues from recycling or energy recovery process is very important for the success of the waste minimization strategy.

The residuals in question can be stored in suitable landfills, holding ponds or tanks in an environmentally appropriate fashion. Collection and treatment

of leachate, methane or other decomposition products will be necessary in some situations.

Residuals management in this context might result in certain materials being segregated and stored in a nuisance ground such that they could be recovered in the future if new technology became available. This is an appropriate technique in a province like Manitoba where public concern to conserve resources is the main force behind the waste minimization strategy.

RESPONSIBILITY FOR WASTE

The Committee believes that responsibility for waste occurs at all stages of the product life-cycle: in design, manufacture, distribution, consumption and use and residual management. At each stage in this cycle, each of us play roles which can contribute to the success or failure of the waste minimization strategy. A key element of the strategy is that we each accept our responsibility for achieving the reduction goal. Consumers, workers, business, educators and governments each have important roles to play. The provincial government has the additional role of holding the rest of us accountable for our responsibilities.

The concept of the distribution chain, from the product designer through to the manufacturer, the wholesaler/retailer, the customer and finally, the operator of the residual management facility, helps to visualize the issue of shared responsibility. What is required is for one key element of the chain in Manitoba to accept responsibility as the focal point for the waste minimization activities of the chain. As discussed later, the wholesaler/retailer or distributor seems to be the most effective point at which to focus the responsibility. The distributor will spread the cost of achieving the waste reduction goal forward to customers or backward to manufacturers according to the competitive pressures operating in the chain.

Residuals management is the final point of responsibility of the distribution chain for the wastes generated in the life-cycle of its products. The distribution chain will exercise this responsibility via payment of user fees and surcharges for landfilling. Increased effectiveness of source reduction, reuse, recycling and recovery will decrease the volume of residuals to be managed and reduce the payment imposed on the distribution channels.

RECOMMENDATION 12: That the "4-R's" in the RAC mandate be expanded to the "6-R's", adding residual management and responsibility, for the purpose of implementing the waste minimization strategy.

RECOMMENDATION 13: That Manitoba Environment adopt the definition of source reduction proposed by The Council on Plastics and Packaging in the Environment and endorsed by the Consumers' Association of Canada: "a collection of activities and actions that, in combination or singularly, lead to a reduction in the quantity and/or toxicity of municipal solid waste. The activities leading to source reduction originate within all

Principles of Sustainable Development proposed for Manitoba's Round Table on Economy and Environment

Our vision of environmentally sound and economic development for Manitoba will be governed by the following principles:

1. Integration of Environmental and Economic Decisions

This principle requires that we ensure economic decisions adequately reflect environmental impacts, and environmental initiatives adequately take into account economic consequences.

2. Stewardship

This principle requires that we manage the environment and economy for the benefit of present and future generations.

Stewardship requires the recognition that we are the caretakers of the environment and the economy for the benefits of present and future generations of Manitobans. A balance must be struck between today's decisions and tomorrow's impacts.

3. Shared Responsibility

This principle requires all Manitobans acknowledge responsibility for sustaining the environment and economy, with each being accountable for decisions and actions, in a spirit of partnership and open cooperation.

4. Prevention

This principle requires that we anticipate and prevent significant adverse environmental and economic impacts of policy, programs and decisions. Where it is impossible to prevent all environmental or economic damage from occurring, mitigative measures must be taken.

5. Conservation

This principle requires that we maintain essential ecological processes, biological diversity and life-support systems of our environment and natural resources; harvest renewable resources on a sustainable yield basis; make wise and efficient use of our renewable and non-renewable resources.

6. Recycling

This principle requires that we endeavour to reduce, reuse and recover waste by-products of our society.

7. Enhancement

This principle requires that we enhance the long term productive capability, quality and capacity of our natural ecosystems.

8. Rehabilitation and Reclamation

This principle requires that we endeavour to restore damaged or degraded environments to beneficial uses.

Rehabilitation and reclamation requires ameliorating damage caused in the past. Future policies, programs and developments should take into consideration the need for rehabilitation and reclamation.

9. Scientific and Technological Innovation

This principle requires that we support research, development, testing and implementation of technologies essential to further environmental quality and economic growth.

10. Global Responsibility

This principle requires that we think globally when we act locally. Global responsibility requires that we recognize there are no boundaries to our environment, and that there is ecological interdependence among provinces and nations. There is a need to work cooperatively within Canada, and internationally to, accelerate merging environment and economics in decisions and to develop comprehensive and equitable solutions to problems.

segments of industry, as well as individual consumers and government. However, source reduction takes place outside and separate from solid waste management processes, such as recycling incineration and landfilling. It is rather, a direct resource conservation measure."

SUSTAINABLE DEVELOPMENT

A waste minimization strategy for the 1990's should be based on the principle of sustainable development. The government of Manitoba has committed itself to developing and implementing a sustainable development strategy. A core document entitled "Towards a Sustainable Development Strategy for Manitobans" will shortly be released by The Manitoba Round Table on Environment and Economy. The accompanying box lists the Principles of Sustainable Development which will set the framework for a sustainable development strategy in the province as adopted by the Manitoba Round Table.

Both the sustainable development strategy being prepared by the Manitoba Round Table and the waste minimization strategy prepared by the Action Committee take as their basis the statement at the core of the Report of the World Commission on Environment and Development:

> "Humanity has the ability to make development sustainable - to ensure it meets the needs of the present without compromising the ability of future generations to meet their own needs."

This challenge issued by the World Commission is being extended and refined in the work on The 2nd World Conservation Strategy Project. The Project defines sustainable development as a complex of interacting principles each of which has relevance for development activities. The principles are:

> "Ecological sustainability requires that development be compatible with the maintenance of ecological processes, biological diversity and biological resources.
>
> Social sustainability requires that development increase people's control over their lives; and maintain and strengthen community identity.
>
> Cultural sustainability requires that development be compatible with the culture and values of the people affected by it.
>
> Economic sustainability requires that the development be economically efficient and that it be equitable within and between generations."
>
> (The 2nd World Conservation Strategy Project Draft Report)

The waste minimization strategy takes its cue from the concept of economic sustainability although the other three principles must be respected with equal care.

The elements of sustainable economic development as perceived by the Action Committee are: materials and energy efficiency, wise use of natural resources, conservation and stewardship. Each of these elements is important to the achievement of sustainable economic development and to the achievement of the goal of the waste minimization strategy.

Materials and energy efficiency are increased by implementing the first four "R's" of waste minimization: source reduction, reuse, recycling and energy recovery. These activities, of course, are the core of the waste minimization strategy.

In our attempts to use natural resources wisely, we try to achieve the greatest value from the resources in the face of scarcity – what the economists would label economic efficiency. Wise use in this context could involve shifting consumption towards those who are presently consuming the least since their level of unmet wants will be the most basic.

In conservation and stewardship we accept responsibility for the interests of others and defer present use or consumption of resources as necessary to recognize the need underlying those interests. The "others" can be future generations of humans, other members of the present generation or other species sharing the planet. An element of stewardship is that we recognize and pay the cost of human induced environmental change as the price of having the right to make that change.

Policies of "life-cycle costing" or "full-costing" lead us to recognize these costs. We estimate costs for all elements of the product life-cycle from extraction of materials, to processing, to manufacturing and distribution, to management of wastes and residuals. Full costs include all of the costs of an activity including environmental costs which are not part of normal market price. Design of products for waste minimization and recycling frequently can reduce the full life-cycle costs of a product.

RECOMMENDATION 14: That the Minister of Environment recommend to the Manitoba Round Table that WASTE MINIMIZATION and RECYCLING rather than Recycling and Waste Management be the topic of a substrategy component of its Sustainable Development Strategy.

RECOMMENDATION 15: That the Minister of Environment recommend that the Manitoba Round Table adopt the RAC Action Plan report as a substrategy report.

SHARED RESPONSIBILITY

The final principle adopted by the Committee, shared responsibility for waste minimization, arises from the need for stewardship in a sustainable economic development strategy.

POLICY FRAMEWORK FOR WASTE MINIMIZATION

The Committee's recommended policy framework is founded on the principle that the distribution chain should share responsibility for the wastes generated by its products during their life cycle. It recognizes that the objective of the government is to have a waste minimization strategy as a component of a sustainable development initiative rather than simply having a recycling strategy or a beverage container strategy.

Under the waste minimization strategy, individuals or firms distributing products in Manitoba with an annual sales volume in excess of $100,000 must develop waste minimization action plans for those products. These plans are to be consistent with the waste reduction targets set for each product group or material. (The level of this threshold sales volume will be addressed in a Workshop at the Conserving Our Future Conference.)

This requirement is consistent with policies being developed at the national and international level. The National Packaging Protocol being developed in Canada calls for industry to develop a plan to reduce packaging waste in Canada by 50% (1988 base) before the year 2000. In the United States, several industrial and government groups are also developing strategies. For instance, the Council of North-east Governors and the packaging industry have agreed on a set of packaging guidelines aimed at source reduction of packaging waste.

The midwest states in the U.S. are also holding discussions with the packaging industry about package related waste problems. One of the results of the governments' concern has been the formation of the Council of Solid Waste Solutions as a subsidiary of the Society of the Plastics Industry.

The waste minimization strategy is also consistent with emerging strategies for the advancement of sustainable development. For example, the draft of The 2nd World Conservation Strategy Project contains a section entitled Sustainable Development Strategy for Business and Industry. The objective of this part of the strategy is to involve business at an early stage in the formation of sustainable development initiatives. A key element of the component is the establishment of performance targets and codes of conduct for particular business and industry sectors.

The waste minimization strategy developed by the Action Committee allows the distribution chain to choose the most effective method of achieving the waste reduction targets for their products. They would be able to develop their own waste minimization programs or to buy-in to established programs. The mix of activities can be different from region to region throughout

the province if such variation permits cost-effective achievement of the reduction targets.

The strategy contains several major elements: the development and filing of waste minimization action plans covering the entire life-cycle of the product, the monitoring of achievement, the provision of incentives for early achievement, and the provision of penalties for non-achievement.

The distributors of products would be responsible for filing action plans with Manitoba Environment. If a product is distributed in Manitoba as of June 30, 1990, a plan for that product is required by January 1, 1992. For products to be introduced after the cut-off date, the waste minimization action plan must be filed prior to product introduction.

These plans would specify the activities to be used to reduce the waste generated in the life-cycle of the product: manufacturing waste, raw material containers, wholesale product containers, obsolete and spent products, retail containers. Contracts with suppliers calling for source reduction could be one element of the plan. Contracts with recycling agencies could be another part. Such contracts would include performance milestones, evaluation criteria, and compliance incentives. Waste minimization action plans can be updated periodically at the distributor's initiative. New plans would be filed if revised targets were negotiated.

Distributors would annually file with Manitoba Environment a "Statement of Progress" toward achievement of the waste reduction target for their products. The form and nature of the Statement of Progress would be negotiated between the government and stakeholders as part of the target setting process.

In order to provide incentive for early compliance the Committee suggests that the province develop a distinctive way of recognizing products that are achieving the waste reduction targets, through the use of an honour roll or a distinctive logo or through public education. Such recognition could be granted early; and its use revoked as a penalty for non-compliance. The intent would be to provide a competitive advantage to those products and firms which are providing social benefits by achieving the waste reduction targets.

Official recognition would be granted for a twelve month period following the achievement of milestones toward the target. Evaluation and review would take place annually, based on the filed Statement of Progress. Distributors not achieving reduction milestones would not be entitled to use the official recognition.

After January 1, 1995 products and firms not achieving interim targets or milestones would be assessed a pre-disposal levy. The levy would be scaled according to the level of non-performance and to the importance of the material in the waste stream. The first levy assessment would be as of April 1, 1995 and would be based on the Statement of Progress filed for the 1994

calendar year. Firms would continue to pay the pre-disposal levy until they achieve their targets and milestones.

RECOMMENDATION 16: That prior to January 1, 1991 the Manitoba Government put in place a waste minimization strategy for products distributed in Manitoba. The minimum gross sales volume requiring a distributor's participation would be set at $100,000 per year. Distributors would file waste minimization action plans for each product with a volume over the threshold. The details for individual action plans would be negotiated as part of the waste reduction target negotiation.

RECOMMENDATION 17: That the Manitoba Government establish an incentive program to encourage early achievement of targets and milestones. The incentive would be permission to use a recognition format adopted and promoted by the government.

RECOMMENDATION 18: That the Manitoba Government establish appropriate pre-disposal levies for all products distributed in Manitoba for which waste reduction targets or milestones are not met. The levy would be scaled according to the level of non-performance and to the importance of the material in the waste stream.

RECOMMENDATION 19:That the Manitoba Government require distributors who have not filed waste minimization action plans by January 2, 1992 to post an appropriate performance bond. This bond would be forfeited if the distributor failed to meet interim waste reduction targets.

EDUCATION & INFORMATION

NEED FOR INFORMATION

A constant theme in the Committee's public consultations has been the need for more and better information in the community about waste minimization and recycling. There is a major public demand to "get the message out" on issues such as:

- why recycling and waste minimization is needed;
- what can be done to improve the situation in general; and
- what can be done with specific materials to keep them out of the waste stream.

There is no doubt that the restricted availability of opportunities in the province for recycling household discards has limited the active delivery of information to the public. However, this problem may itself point to the strategic need for education and public information programs to help overcome such barriers.

The resources that have been available to respond to public requests for information have been extremely limited in the past.

Manitoba Environment's Recycling Coordinator has spent a significant proportion of his time responding to public requests for general and specific information. As activities dealing with recycling have increased dramatically, the demand for service has exceeded the resource capacity for carrying out any active program in this area. There are no Provincial Government publications on general or specific issues regarding recycling.

Among the activities carried out by the The Recycling Council of Manitoba has been the maintenance of a speakers bureau. The Council has also served as a place where materials on the general subject have been available.

The Westman Recycling Council has carried out various public education functions in communities in the Western part of the province.

The Manitoba Waste Exchange has continued to be a broker of information on the availability and need for secondary materials. Their mandate is to deal with industrial materials. There has been no comparable "hot line" to deal with general provision of information. This function has been addressed by Manitoba Waste Exchange, Manitoba Environment and the RCM on an ad hoc basis.

Manitoba Soft Drink Recycling, as part of its program to promote the recycling of beverage containers has carried out an active program of public presentations for the schools and community organizations.

The Fort Whyte Centre for Environmental Education has undertaken various recycling education programs.

The Consumers' Association of Canada (Manitoba Chapter) has run an active campaign to educate consumers about responsible shopping practices. Waste reduction and the elimination of excess packaging have been major topics of the Consumers' Association of Canada program.

The Resource Recovery Institute has started a recycling hot line as a part of Winnipeg's pilot curbside collection project. While intended for the use of the residents in the pilot area, many other persons have been using this service.

In summary the number of requests for information has been large and growing rapidly. The groups attempting to respond have had limited resources and materials to do this work. Major additional funds are needed.

NEED FOR A COMMUNITY-BASED APPROACH

It was some time ago that the cartoon character Pogo took note of our environmental crisis and observed that "We have met the enemy and he is us!" All of us as consumers indeed have a responsibility for minimizing our contribution to the problems of solid waste generation and to build individual and collective solutions.

Recycling has a strong public appeal. It is something to which we all feel we can contribute. It also provides, on a personal level, a view of how broader environmental issues can be addressed. In this sense it is important to link our understanding of this issue with our understanding of "sustainable development".

Above all, there is a need to provide accurate information on the nature of our solid waste problem to ensure that we concentrate our actions where the need is greatest. Among the issues about which more information is required are:

- the composition of the waste stream;
- an appreciation of the role that packaging plays, (for example, in maintaining public hygiene) so that the concept of "excess packaging" can be more clearly distinguished;
- the environmental and social costs of disposables;
- the alternatives associated with durable and semi-durable goods;
- the role of the individual in the creation of environmental problems and their responsibility in finding the solution; and
- the special problems of litter.

As we move toward solutions, it is important that a broad understanding of alternatives is achieved. The most immediately appealing and endorsed "solution" of the day may not correspond to the most cost-effective long-term

approach to what is a complex set of problems. Responsibility for conducting a public discussion of issues lies not only with Government, but with all stakeholders, including the media who are the main providers of information to the general public. Manitoba Environment should work with all those organizations involved in public and consumer education to ensure that materials and programs are cost-effectively and cooperatively developed and delivered. (Section 9 raises additional issues of "grassroots" and community group involvement.)

At the same time, consumers require the clearest explanation of how they can take advantage of waste minimization and recycling opportunities including "what" materials are being accepted by "whom", subject to "what quality conditions". Experience from recycling collection systems for household discards consistently demonstrates the need for promotion and education. Encouragement to get out recyclables and to maintain effective source separation are the major roles of these programs.

RECOMMENDATION 20: ***That Manitoba Environment, in co-operation with other stakeholders, ensure that a province-wide community outreach program be actively pursued including:***

- ***materials and speakers on recycling and waste minimization;***
- ***a quarterly newsletter to promote recycling and waste minimization;***
- ***a "hot line" with consumer information on recycling opportunities;***
- ***an anti-litter campaign and***
- ***coordination with the Canadian Council of Ministers of Environment.***

NEED FOR A SCHOOL-BASED APPROACH

As education must play a critical role in the strategy to reduce the volume of waste that is generated in Manitoba, the Committee considers it to be important to review the present programs and opportunities that exist in the school system.

A workshop on "Environmental Education - Needs and Opportunities" was held in January 1990 to address these issues, involving the Department of Education, the Manitoba Association of School Trustees, Manitoba Teachers Society and other organizations involved in the area.

It was generally agreed that while students demonstrate an active interest in environmental issues in general, and recycling in particular, little material on the subject has been incorporated into present curricula. Numerous initiatives have been pursued in different schools and classes, built on the enthusiasm of individual principals, teachers and classes. There has been, however, minimal coordination and centralization of materials and experiences.

It was noted that the value of addressing environmental issues in the schools

extends well beyond a broadening of students' intellectual horizons. Students themselves are important catalysts in questioning "how things are done", by themselves and their families.

In recognition that one learns best by "doing" and that students themselves are very aware of inconsistencies, it was felt to be important that any modification of curriculum be complemented by the active pursuit of recycling opportunities through the schools themselves. This could be done through purchasing policies to obtain recycled materials and through programs to source separate in-school wastes for recycling. It was acknowledged that in many cases this could require considerable changes to administrative practices, and that expenses may be incurred(e.g. acquisition of storage containers for source separation recycling projects).

RECOMMENDATION 21: That Manitoba Environment, in consultation with the Department of Education and interested organizations, develop materials and activities to be integrated into existing K-12 curricula, using waste minimization and recycling as examples of environmental and sustainable development issues.

RECOMMENDATION 22: That School Boards promote the adoption and implementation of waste minimization and recycling plans to demonstrate issues and options included in the school curricula.

NEED FOR DEVELOPING TECHNICAL SKILLS

To meet the challenge of accomplishing a 50% reduction in waste will require new technical skills and an integration of new ideas in decision-making. Some specific applications of this approach include:

- In-service sessions for municipal and industrial employees;
- Community college programs for certificates in waste reduction and prevention and recycling technicians;
- University level courses for students pursuing degrees in civil, environmental and industrial engineering as well as in industrial design;
- University level courses for students pursuing degrees in education, environmental studies, urban studies, business administration, and graduate students pursuing the Master of Natural Resource Management Degree.

RECOMMENDATION 23: That the Minister of Environment consult with the Minister of Education to ensure that the above training programs are provided.

MARKET AND SYSTEM DEVELOPMENT

Developing techniques for minimizing waste will require changes in practise for us as consumers, as workers and even as investors. While Sections 2 and 3 of the Draft Action Plan dealt with how to decide where we are going, the following sections deal with broad guide-lines for the government to use to help us get there. Each of the R's pursued through the waste minimization strategy will require support. Reduction may need research and development, Reuse may need education, Recycling will need the development of markets, and Recovery will need technological and market development.

GOVERNMENT PROCUREMENT POLICY

Most of us are becoming aware of the importance of "green consumerism". We vote with our wallets every day, and a yes or no at the checkout stand has direct impacts on what stays on a store's shelves. Manitobans can see evidence of this through the environmentally unfriendly products which have disappeared, and in new products which are beginning to be offered, or in products which have been available for a long time. While action by the individual consumer is very important, acting together through government has equally important impacts.

The Manitoba Department of Government Services spends an average of $100 million per year buying some of the supplies that government employees use in the course of their work. Additional amounts are spent directly by individual departments. Obviously government purchasing is a major influence on our economy.

Because of the importance of tax payers getting the best possible deal on government expenditures, the overall purchasing policy is to accept the lowest price which meets specifications. The committee endorses this policy as fundamental to good government.

The Manitoba Government has shown its support for recycling in its revised purchasing policy. The Government will purchase recycled and environmentally-sensitive products where practical and effective while taking environmental considerations into account in its internal operating and disposal decisions. It is the first province to state its preference to use recycled paper, rerefined lubricating oil, sanitary products made with recycled fibre and gasohol. This policy does not imply any increase in government expenditures or taxes. It simply helps products made from recycled materials to compete on an more even footing. The new procurement policy of the Manitoba

government is as follows:

> **The government will purchase recycled and environmentally-sensitive products where practical and effective while taking environmental considerations into account in its internal operating and disposal decisions.**

Another recent move by the provincial government was a change in the specifications to allow cellulose insulation, made from recycled paper, compete on an even basis with fibreglass. The committee applauds the activities to date, and would like to see further exploration of waste reduction in government through the use of two-side photocopying, the testing of composting operations in some parks, the promotion of china cups at staff coffee machines, etc.

RECOMMENDATION 24: That the Manitoba Government give the Interdepartmental Procurement Committee a continuing mandate to identify additional opportunities to purchase products made from recycled materials. The existence of this Committee and the procurement policy should be widely publicized.

The government will be required to submit waste minimization plans for its own activities. If cost savings from waste reduction measures can be observed, those savings should be redirected to programs to further reduce waste. This would be a form of a waste diversion credit, which in a small way, could be used to encourage waste reduction activities. Small scale evaluation of this approach could provide information on the expansion of the approach on a broader scale.

RECOMMENDATION 25: That the Manitoba Government tender for recycling services on the same basis as it tenders for waste removal and disposal services.

The current policy applies to goods purchased centrally through the Department of Government Services. This is the right place for the program to start. However, only a small percentage of government spending is conducted by this department, and much more is spent through provincially funded agencies, such as municipalities, school divisions, Crown Corporations, hospitals, and other government funded agencies. Because products containing recycled material, such as paper, can frequently be used without cost or performance problems, every agency receiving provincial funding, above a certain limit, should be required to use the product which assists recycling or preservation of the environment.

RECOMMENDATION 26: That the Manitoba Government require the adoption of its procurement policy as a requirement for receiving any provincial funding above $100,000.

RECOMMENDATION 27: That all Provincial Crown Corporations be required to adopt the procurement policy specified above.

SECONDARY MATERIAL RESEARCH AND DEVELOPMENT

During its public consultations, the Committee learned of many economic opportunities using waste reduction technologies including; refillable bottles, diaper services, writing paper from waste newsprint and glossy paper, rigid insulation from newsprint, reinforced glass products from cullet, plastic products from post consumer waste and many more. The success of the waste minimization strategy will be enhanced by conducting research and development into these and similar technologies and by research and development of waste reduction activities in Manitoba in general.

Successful research and development programs focused on waste minimization could create new economic activities and employment in Manitoba. There is great potential to save valuable resources, presently wasted, which could encourage businesses to locate here.

At the very least, working locally to develop and implement waste reduction programs will increase our knowledge and expertise in making development sustainable.

RECOMMENDATION 28: That the Federal and Provincial Governments put policies in place, and redirect funds, to encourage research and development in Manitoba into waste reduction with attendant increase in knowledge and expertise, and industrial potential in the area of environmental sustainability.

RECOMMENDATION 29: That the Manitoba Government designate an existing agency to coordinate the development of products and processes which could use secondary materials from Manitoba's waste stream.

MANDATED PRODUCT COMPOSITION

California and Pennsylvania, among other jurisdictions, have introduced mandatory product composition regulations for certain products. For example, newsprint might be required to have a particular percentage of recycled fibre content or glass containers to have a certain amount of recycled glass. While on the surface, such requirements have attraction, the Committee, after reviewing those regulations, believes that they are not appropriate for Manitoba. Firstly, Manitoba's market is too small to have much of an impact by itself upon manufacturers outside of Manitoba. Second, exports are crucial to many of Manitoba's manufacturers and such regulations may affect the viability of those exports with a resulting loss to Manitobans. Thirdly the exports will have to meet the regulations of the importing markets.

Many of the recommendations of the Committee, if adopted, will change the composition of products sold within Manitoba by ensuring they include a

consideration of disposal when they are purchased. The recommendations will make waste minimization a cost of doing business within the market system. National regulations are a more effective place to regulate product composition because the mechanisms already exist and national regulations ensure a level playing field across Canada. Increased consumer advocacy for recycled products, will continue to drive the market to increase recycled material content in products at an adequate rate.

THE NATIONAL PACKAGING PROTOCOL

In April 1989, the then Canadian Council of Resource and Environment Ministers - now the Canadian Council of Ministers of the Environment (CCME) - stated:

> "Waste management is an urgent and pressing national problem. Some jurisdictions are already running out of landfill sites, in part because Canada is one of the most wasteful nations. For this purpose Ministers have instructed the Waste Management Committee of CCREM to develop a packaging policy for Canada within a broad review of solid waste management opportunities including government purchasing and recycling policies. It was agreed that targets and schedules for waste minimzation be established including a fifty percent (50%) reduction in waste generation by the year 2000."

The National Task Force on Packaging first met in June, 1989 and have hired consultants to prepare a technical data base on the management of packaging. They have also conducted Canada-wide consultations, including a meeting in Winnipeg with members of the Recycling Action Committee and other interested stake holders.

The draft Protocol is scheduled to be released to the public on March 20, 1990. For more information, please contact David Hay, Environment Canada, (613)953-1109

RECOMMENDATION 30: That the Manitoba Government encourage Manitoba based manufacturers to include recycled materials in their products.

RECOMMENDATION 31: That the Manitoba Government support national initiatives to encourage the use of recycled materials in products, but not set minimum content criteria.

WASTE MINIMIZATION AND RECYCLING FACILITIES

The Committee has not reached consensus on the appropriate roles for various groups in providing Manitobans with access to recycling opportunities. A number of options are discussed in Section 9. One issue on which the Committee agreed was that waste minimization and recycling equipment purchased and installed in Manitoba should be eligible for a rebate of the Provincial Sales Tax.

***RECOMMENDATION 32:** That the Manitoba Government investigate and implement a Provincial Sales Tax rebate for waste minimization equipment purchased and installed in Manitoba.*

RESIDUAL MANAGEMENT

WASTE DISPOSAL GROUND REGULATIONS

The Committee has included Residual Management as the 5th R. It refers to properly managing those materials which cannot be reduced through the other measures. The "management" activities include the operation of landfills, holding ponds or tanks to store any remaining waste materials. Collection and treatment of leachate, methane or other decomposition products may be necessary in some cases. Manitoba Environment is currently consulting with Municipal governments on an upgraded "Waste Disposal Grounds" Regulation. The Committee offers the following comments.

Aside from a requirement for a separate area for bulky metal objects at waste disposal facilities, the regulations contain no provisions for other recovery measures such as segregated material drop-offs or composting.

RECOMMENDATION 33: That Manitoba Environment review again the proposed Waste Disposal Ground regulations to ensure that they do not inhibit recycling.

CONSOLIDATION OF WASTE DISPOSAL GROUNDS

Because waste reduction and waste management are so closely linked, the Committee suggests that the number of landfills in the Province be reduced by consolidating existing sites into larger, upgraded ones. A fully implemented waste reduction program will reduce the volumes of materials being transported to and deposited in Waste Disposal Grounds. Full time staffing, the provision of scaling and inspection to provide management data for waste reduction and prevention strategies would be possible at the consolidated sites. In particular the Committee recommends that the establishment of Class III Waste Disposal Grounds be restricted to exceptional hardship cases. Instead, small population centres could be serviced by waste transfer stations which could expand recycling opportunities for these communities. Further Manitoba Environment should examine providing incentives to operators of Class I and II Waste Disposal Grounds to consolidate and establish facilities providing a higher level of protection of the environment.

RECOMMENDATION 34: That consolidation of Waste Disposal Grounds become a "principle of application" for the regulations and that Class III Waste Disposal Grounds be permitted only as an "exception to the regulations" by Manitoba Environment.

TRANSFER STATIONS

Waste transfer stations are facilities where small loads of waste are combined into larger loads for transport to a waste disposal facility. These facilities could effectively replace many of the small waste disposal grounds in Manitoba and offer an excellent opportunity for collection and forwarding of source separated materials. Depending on the situation and the population served, transfer stations could include facilities for upgrading, shredding, breaking and/or baling of secondary materials.

RECOMMENDATION 35: That Manitoba Environment provide technical assistance to municipalities covered by the Municipal Act to develop proposals for waste disposal ground consolidation including the provision of transfer stations and recycling depots.

RECOMMENDATION 36: That the Minister of Environment encourage municipalities to form waste minimization regions or districts.

WASTE COLLECTION AND LANDFILL CHARGES

Free collection of waste, subsidized by municipal governments, is a real financial disincentive to encouraging the public and industry to get involved with waste reduction. It is also a misguided use of property taxes which encourages waste. Pressures on the property tax base encourage municipalities to operate landfills and nuisance grounds at minimum compliance with environmental protection regulations. These pressures to operate at minimal levels merely defer to future generations the costs of such practices.

Moving towards consolidated landfills and transfer stations would be facilitated by the imposition of charges on a user pay basis. Fees charged by municipally operated or sanctioned facilities would be used to pay for all costs associated with operating our upgraded landfills. They would also be used to increase enforcement measures to discourage illegal dumping or littering of wastes.

RECOMMENDATION 37: That the Manitoba Government amend the Municipal Act and the City of Winnipeg Act, as necessary, to permit charging a fee for collection and handling of wastes on a volume related basis.

RECOMMENDATION 38: That the Manitoba Government actively encourage municipalities to levy charges for waste collection and handling on the basis of volume of waste generated rather than paying for this service through property taxes.

MANITOBA ENVIRONMENT

Effective implementation of the Recycling Action Committee's recommenda-

tions represents a new initiative for Manitoba Environment. The Committee is recommending that the onus for waste minimization is primarily with the distribution network. However, the Department of Environment will require additional staff and resources to take on the following new activities:

- monitoring distributor waste reduction action plans;
- monitoring achievement of targets and compliance;
- monitoring the incentive plans for target achievement;
- developing and coordinating waste reduction and recycling education;
- managing the infrastructure grant and loan programs;
- increased monitoring of Waste Disposal Grounds and transfer stations.

Concerns have been expressed as to whether the Department has sufficient staff to fulfill its current mandate. For a waste minimization initiative, the Department of Environment will require additional resources and personnel in the form of waste management planners, engineers, auditors, educators and community development workers. The following chart indicates the level of support which recycling is receiving in other Canadian jurisdictions.

PROVINCE	RESOURCES ALLOCATED TO RECYCLING
B.C.:	Allocation $2 Million for solid waste management this year. Staff of four. A five year proposal has been approved in principle for a budget of $150 Million, and a staff of 20.
Alta.:	Seven people employed in Recycling while there are four with Beverage Containers. Budget is approximately $2 Million.
Sask.:	No specific allocation for Recycling. Staff includes .75 of a staff year.
Man.:	One staff year, annual budget of $25,000
Ont.:	Twenty nine staff years allocated to a variety of programs. 1989/90 expenditures around $24 million, including more than $11 million to support "Blue Box" programs.
Que.:	Current budget is approximately $1.0 Million. Twenty people in Waste Management and 10 in the Depot System.
N.B.:	Current Budget is approximately $3.0 Million. With a staff of 1 in Recycling and 3 in Solid Waste Management. Currently have Proposal for a Budget of $5.0 Million for Five Years.
N.S.:	No specific Budget per se for Recycling. Two full-time staff in Field Services working on Recycling.
Nfld.:	No staffing appropriated as of yet, however for new fiscal year there is to be a Recycling Co-ordinator. There is a Budget of $55,000 for delivering information programs.
P.E.I.	No information available at this time

RECOMMENDATION 39: That Manitoba Environment should be given sufficient additional resources to properly implement the elements of this action plan.

OPTIONS FOR DISCUSSION

In Sections 1 through 8, the Recycling Action Committee was able to achieve a general consensus on longer term actions required to reduce waste by 50% in Manitoba. The focus on the longer term fits well with the development of a provincial sustainable development strategy. It also matches the priority given source reduction of waste.

Consistent with the responsibility of producers and distributors of products and materials, consultations and negotiations are proposed for the establishment of targets for waste minimization. Individual action plans are to be designed, implemented and assessed for effectiveness. From this perspective, it is recommended that much of the detail is to be worked out in line with the principles and general directions that are outlined.

But important questions remain around which the Recycling Action Committee has not yet been able to achieve consensus:

How are we to effectively build on the broad public support for action?

How are we to promote coordination among different materials and regions?

How are we to fund initiatives in waste minimization and recycling?

The Town Hall meetings demonstrated that many Manitobans recognize and are disturbed by our present level of wastefulness. They want immediate action. The Committee shares these feelings of urgency, but is aware of the waste and cost of rushing too quickly into programs and activities which might not prove cost effective in the long run. Other communities facing immediate crisis have rushed into programs which have failed to provide comprehensive and coordinated solutions.

The Committee believes that immediate action in priority areas is wise as long as it does not undercut the longer term strategy. To develop shorter term initiatives, two questions need answers. First, what issues should be targeted as priorities? Second, what tools should be used to achieve the change?

The Committee has begun to explore several approaches for priority action, including the establishment of high initial waste reduction targets for targetted products and materials. The Conserving our Future Conference, March 9-10, is an opportunity for the public to provide input and direction on these issues. Discussion at that conference will be addressed in the Final Action Plan which will be submitted to the Minister of Environment.

BUILDING ON THE "GRASS ROOTS":

THE ROLES OF COMMUNITY GROUPS

The Committee's strategy rests on the recognition that responsibility for contributing to waste minimization and recycling is shared by all members of society.

The Committee has chosen to hold the distributor of a particular product responsible for the life-cycle of that product. The distributor is the link between the stages in the product's life-cycle: design, production, distribution, consumption and disposal.

The consumption stage of the cycle, particularly for so called "consumer goods", is the most dispersed stage. Worn out products, obsolete goods, and empty packages are generated daily in every household in the province. The hundreds of thousands of locations where these materials are generated presents a challenge to implementing a waste minimization strategy.

It is likely that the distributor of a product will want to actively involve consumers, both singly and in groups, in the waste minimization action plan for its products -- particularly if the plan involves source separation and collection of household discards for recycling.

Getting help from a grass-roots community group is one of the best ways for distributors to actively involve individuals and households. Recycling programs in many communities depend on community groups to provide labour in the collection and sorting of materials. This is true at present in Manitoba and has been through the years. The Patriotic Salvage Corps during World War II, the Boy Scouts and Girl Guides, the Salvation Army and countless other groups have been active in collecting recyclables through the years. Today many community groups continue to collect and sell beverage containers and newspapers to processors as a fund raising activity.

The grass-roots demand to actively help with recycling has grown with increased awareness and concern about waste and the environment. Many established groups are adopting recycling as a primary activity while other new groups are being formed to undertake recycling.

These groups are seeking effective ways to reduce waste and recycle materials as well as carry out education and promotion activities. They are increasingly turning to government for information, advice and money to undertake such programs. At present, the government does not have sufficient resources to deal with these requests and demands for help. This kind of grass-roots movement is basic to democracy, however, and the government is seeking ways to encourage it. As a result the Action Committee's mandate requires that our strategy involve community groups in waste minimization and recycling.

COMMUNITY INVOLVEMENT: WHOSE JOB?

At a time when high taxes and high government deficits are prominent in the news, it is hard to set up a new government program even if it is one designed to help citizens help themselves. This is true with programs to assist community based recycling as well.

Some of the business stakeholders on the Committee make the legitimate statement that "Industry is asked to take the responsibility for waste minimization, now government should stand aside and let us do the job!" They go on to say that by providing cash markets for beverage containers, scrap metal and newspapers, industry has already helped establish a community based network of collectors for these materials. As markets for other materials are developed, the community based collection system will expand to include these materials.

Some of the stakeholders representing environmental and community non-governmental organizations want government funds and support so that they can establish a collection system with a minimum of business involvement. They are sometimes suspicious of industry's motives and power. By having their own network, community groups feel that commercial dealings between themselves and industry will be negotiated on a more level field.

OPTIONS FOR DEVELOPING COMMUNITY INVOLVEMENT

1. Business forms a community network without government help.
2. Government forms a community network without business help.
3. Government sets rules and requires business to form a community network.
4. Government abandons the grass-roots movement and forms government agencies to do the job.
5. Government requires municipalities to establish waste minimization and recycling programs as a part of the municipal solid waste management function.
6. Government makes grants available to partnerships formed by business and community groups.

Additional suggestions

7. _____
_____
_____
_____
_____

OPTIONS FOR DEVELOPING COMMUNITY INVOLVEMENT

Option 1: Business forms a community network without government help.

This is the existing situation for many community groups presently collecting beverage containers and newspapers. In some cases, business has established a collection system which visits many locations in the province. In other cases, the community group must bring the material to the processing location.

Community groups sometimes complain that markets close just before they are going to deliver their materials. They also complain that there is not enough information available about prices, materials and hours.

Community groups in this option, frequently operate in a very ad hoc fashion with limited access to facilities or equipment. If a breakdown occurs in the collection system, for instance the buyer's truck won't run, then the community group bears the cost of frustration and aggravation. If there is too much aggravation and not enough support for the community spirit, the group will likely find the activity "not worthwhile".

One response to this problem has been for Business to form or support networking groups, such as Manitoba Soft Drink Recycling. Similar intitiatives have been established elsewhere and are known as BIRP's (Beverage Industry Recycling Programs). An issue to be resolved by community groups in this option is the degree of independence they maintain while continuing close relations with industry,

Option 2: Government forms a community network without business help.

This option would directly provide funding to facilitate citizen involvement. It however could lead to frustration on the business side as it will not have a "stake" in the network. Business might have little confidence in the network, find it irrelevant, and emphasize other activities for meeting its waste reduction targets.

Option 3: Government sets rules and requires business to form a community network.

This option could lead to business frustration through its appearance of bureaucracy and interference: "It's my money, why are they telling me how to spend it?"

Community groups are still likely to be concerned about the difference in power between themselves and business.

Option 4: Government abandons the grass-roots movement and forms government agencies to do the job.

This option has the greatest potential for creating a new bureaucracy, even if the agency is established at "arms length" from government.

Community involvement with waste minimization and recycling is a good way to promote increased environmental awareness and to integrate people's decisions with the environment. If the "industrial or bureaucratic model" of

recycling prevails, the opportunity for environmental involvement is made weaker.

Industry would worry about the tax cost and also about their ability to meet their waste reduction targets in the face of so much "government interference".

Option 5: Government requires municipalities to establish waste minimization and recycling programs as a part of the municipal solid waste management function.

This option has been used in several parts of the United States. Many curb side programs have developed from this option. In this case, industry, the state and the municipalities share the capital cost of the program and municipalities pay the operating cost.

This option shares with the previous option some of the problems of reducing the public's awareness of environmental issues.

Option 6: Government encourages business and community groups to form partnerships for waste minimization and recycling activities.

The government would make grants available to community groups in order to fund a portion of their share of the partnership.

This option is somewhat in vogue at the moment. The federal Environmental Partners Fund uses a similar model for its grants. Arts and cultural organizations are also familiar with programs of this kind.

Business may still find this model too bureaucratic and confining in terms of the rules required for the partnership getting grants. Such rules will be necessary to demonstrate appropriate use of public money. Rules and guidelines for operation may also be necessary to provide the community groups with a feeling that they have sufficient power to be true partners with the businesses in question.

Fiscal responsibility will be required under this model, as well, requiring that business plans be established and reviewed by some agency. Thus there will be additional concern that a "bureaucratic fiefdom is being established on the backs of all taxpayers".

Other Options....

As stated previously the Committee has yet to form a consensus on the ways in which community groups become involved in the waste minimization strategy. Vigorous discussion of these issues by the various stakeholders at the Conserving our Future conference will greatly assist the Committee. We urge all stakeholders to make their positions known to us and other stakeholders.

COORDINATED ACTION

WASTE MINIMIZATION AND RECYCLING FACILITIES

Setting up a system of waste minimization and recycling facilities raises issues similar in nature to the question of the involvement of community groups. Under the Committee's waste minimization strategy, industry will be responsible for achieving the agreed upon waste reduction targets for their products. Industry will establish the facilities necessary to achieve the targets.

Given this perspective, there is no controversy about setting up these facilities -- industry will do the job.

Unfortunately, in some cases the strategy could result in some Manitobans not having easy access to waste reduction and recycling facilities. In this sense commercially based recycling facilities are no different than movie theatres or department stores or other facilities provided on a commercial basis. In general, rural Manitobans face the greatest chance of not having easy access to these facilities but Winnipegers could face the same problem in some instances.

Another result of the strategy could be a longer delay than many Manitobans would like in the development of activities to minimize waste. Targets and performance milestones will be established as quickly as possible but the agreements can not be negotiated overnight. Further time will be required to implement the agreements.

The Committee's opinion is that the basic waste minimization strategy outline in Sections 1 to 8 provides a strong long-term direction, notwithstanding these potential impacts. It is recognized, however, that this strategy must be amended in order to ensure that all Manitobans have early access to at least basic waste minimization and recycling services. Furthermore as solutions are developed for particular products and materials, there may be opportunities emerging for improving efficiency and effectiveness through cooperation.

WASTE MINIMIZATION AND RECYCLING FACILITIES OPTIONS

Option 1: Require that the action plans filed by distributors contain commitments to provide service in all of the major regional centres in the province.

Option 2: Provide capital grants to rural municipalities to establish recycling collection facilities at consolidated regional landfills. (See section 8 Residual Management)

Option 3: Provide capital grants to community organizations to establish recycling programs in smaller rural communities.

Option 4: Provide capital grants and operating funds to communities and organizations to provide interim recycling programs while the longer term strategy is being implemented.

Option 5: Focus on one or two major items in the interim and provide grants and operating funds to provide recycling programs for these materials. Yard wastes, newspapers and corrugated boxes could be good candidates for this option.

Option 6: Provide grants and loans for the establishment of DEMONSTRATION projects designed to determine costs and operating characteristics of various recycling facilities and programs in Manitoba. The projects should include comparative elements and evaluation criteria for assessment.

Option 7: Amend the Municipal Act and City of Winnipeg Act, as necessary, to allow municipalities to charge user fees for waste minimization and recycling programs including the operation of collection systems, transfer stations and landfills. (see Recommendation # 37)

Option 8: Set up waste minimization and recycling programs in Provincial facilities to achieve waste reduction targets within the Manitoba government. Provide access for municipalities and community groups to those programs, upon request, at an appropriate user fee. Composting, office paper collection systems, corrugated box collection and used oil would be suitable candidates for this treatment.

Option 9: Establish a cooperative promotional program in conjunction with product suppliers and existing recycling agencies to increase the level of participation in those programs. Beverage industry and office paper recycling programs come to mind immediately. Other products could be added as recycling systems became available.

Implementation of a mix of these ideas would address the question of access to waste minimization and recycling activities in the province -- in both a regional sense and a time sense. Stakeholders are requested to discuss these issues in the Workshops at the Conserving Our Future conference. Please make your views known.

FUNDING WASTE MINIMIZATION AND RECYCLING

APPROACHES TO FUNDING

The Recycling Action Committee has endorsed the "polluter-pays" principle ("taking responsibility for our own waste") as the most equitable and rational approach to the problem of solid waste. This is the basis for relying on the setting and achievement of targets by generators of waste, notably the producers and distributors of products and materials with the potential to become waste. But thoroughly applying the "polluter-pays" principle will take time, and there is a need for accelerating action.

By definition, it has been identified that we must redirect our activities and establish new ways of doing things to minimize waste. This will require investment. It will require the learning and application of new approaches. Who and what institutions are to be involved? There are several approaches to be considered.

1: Rely solely on producers and distributors

2: Rely solely on a centrally coordinated approach

3: Central coordination to supplement producers / distributors

Approach 1: Rely solely on producers and distributors

In the long term, relying solely on the producers and distributors of materials to develop and implement plans for minimizing waste would be the most equitable and efficient approach. Flexibility would allow the selection of the most efficient solutions to problems.

In the short term, however, there would be considerable problems in relying solely on this approach. Firstly there would be very uneven development. For products and materials where it is relatively straight-forward to achieve targets, there can be relatively rapid compliance. For other products and materials, there would likely be a longer wait.

There would be limited incentive for a coordinated approach extending to materials or regions where costs are relatively higher and barriers relatively greater.

Acceleration in achieving waste minimization goals can be achieved by establishing targets for compliance in relatively shorter time frames.

Approach 2: Rely solely on a centrally coordinated approach

A centrally coordinated approach would require the greatest degree of central administration. The experience of multi-material collection systems

has been that funds for supporting such initiatives come from designated products and materials (e.g. products such as soft drink containers can subsidize programs for other materials); from general revenues; or from funds raised from surcharges on products and materials or on collected waste.

This approach weakens the direct responsibility of producers and distributors in "looking after their own waste" - the group with the greatest technical knowledge of solutions. It also invites resentment from producers, distributors and consumers of the designated products and materials who "foot the bill" for the entire system.

Approach 3: Central Coordination to Supplement Producers / Distributors

This approach, while relying principally on producers and distributors to develop and implement targets for minimizing waste, accepts the need for developing new initiatives, particularly for building new ways of addressing problems. A level of funding, considerably more modest than Approach 2, would be required. Ensuring the efficiency of a central administration would require careful scrutiny. It would be important to keep the incentives that producers and distributors have in Approach 1 to address their own problems, without resorting to "double taxation".

Pursuing Approach 1 means that there would be no need for centrally coordinated funding of initiatives. Appropriate funding would come directly from producers and distributors of products and materials prodded by the targets set and enforced by the regulatory agency. Approaches 2 and 3 both recognize a need for some central coordination, and accordingly a need for centrally raising funds to support this.

FUNDING INITIATIVES: REVENUE OPTIONS

An equitable approach to sharing the costs incurred in the life cycle of a product or material is to incorporate these costs in its price. The intent in this approach is to ensure that an appropriate price is paid for a product or material (its disposal is not subsidized) and that funds are available to finance programs that may be required to minimize waste, recycle, or safely dispose of residues.

The Committee has felt that the most effective and comprehensive approach to waste minimization is to allow producers and distributors to have the opportunity to meet designated targets. Should targets not be met, however, it would be appropriate for government to consider options.

There are two different ways to raise revenues for funding waste minimization and recycling initiatives consistent with the "polluter-pays" principle: (1) product charges and (2) waste disposal / municipal user charges. Product charges can be placed directly by producers and distributors or they can be

imposed by government. Waste disposal charges would be imposed by provincial or municipal levels of government.

For any option it is likely that the consumer would be the one who ultimately would pay. The amount to be paid will vary with the efficiency and "overhead" associated with each option. Of equal concern is the degree to which the revenues raised are applied to waste minimization initiatives associated with the products, materials or activities from which the revenues are raised.

FUNDING THE 6 R's: REVENUE OPTIONS

1. Deposits with unredeemed deposits transfered to government / waste minimization fund.
2. Taxes earmarked for waste minimization and recycling.
3. Charges on Difficult to Dispose of Materials.
4. Pre-disposal Fees or charges.
5. Waste disposal charges or levies.
6. _____

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Option 1: Deposits

Through the years several different approaches to litter control have been attempted in North America. One of the most common has targeted the beverage industry with mandatory deposits and refunds on prescribed containers. This was the basis of the British Columbia Litter Act (1970) and its regulations; as it was for the Beverage Container Act (1971) and its companion Litter Act (1972) in Alberta. It was also one of the reasons for the Nova Scotia Beverage Act (1978). In the United States, 9 states have mandatory deposit legislation; although there have been no new additions to this list since 1983. Since 1972, voters and legislators have rejected over 2,000 deposit bills and programs.

In British Columbia, the 1989 Report of the BC Task Force on Municipal Solid Waste favoured retetention of the mandatory deposit approach. Under the heading "Litter Control", the Task Force recommends the continuation of a container deposit/refund system for rigid sealed containers until recycling programs exhibit adequate recovery. The proposal addresses a broad range of beverages and drinks including beer and cider with exemptions for dairy products, non-dairy milk substitutes and fruit juices (more than 85% juice). Spirits and wine appear to be excluded.

In Manitoba, the present system of deposits on containers and minimum proportions of refillables for soft drinks is the result of voluntary initiatives by the industry. For materials where the system has been in place for some time, such as aluminum soft drink cans, it has allowed the achievement of return rates (40-50%) without the considerable expense of operating deposit-redemption systems. This is in the mid-range of achievement for jurisdictions with deposit systems. For newer materials such as polyethylene terephthalate (P.E.T.) plastic beverage bottles, progress is being made but return rates still remain low (approximately 30 % in 1989 up from under 10% in 1988).

The existence of buy-back programs has provided opportunities for community organizations to collect materials and raise funds for community projects. The Committee feels that the establishment of mandatory deposit systems should only follow an established failure to meet recovery targets.

Where deposit systems will or do exist, provisions should ensure that it is not in the financial interest of a distributor to maintain a low redemption rate and hold on to unrefunded deposits, as is presently the case with beer cans. While beer bottles achieve a 98% return rate, beer cans which have a 5¢ deposit only achieve a 50% redemption rate. This has resulted in the brewers retaining approximately $500,000 in unrefunded deposits.

Option 2: Taxes

An alternative approach to deposits was pioneered in Washington State in 1971. In order to fund a Model Litter Control Act, the state imposed a manufacturer's tax on products, containers, and packaging with a reasonable potential to create litter: manufacturers "... whose products, including the packages, wrappings and containers thereof, are reasonably related to the litter problem". The industries assessed under this provision have included: packaging, beverages, food and grocery, drugs, newspapers and magazines. The tax is set at 0.015 of one percent of gross value. Proceeds are used for anti-litter education programs, litter clean-up and recycling. This approach also has been proposed by the Nova Scotia Task Force on Litter Control appointed in March 1988.

The announcement by the Nova Scotia Minister of Environment gave special emphasis to recycling as a method of dealing with litter. The Litter Control Task Force recommended that Nova Scotia repeal the Beverage Containers Act and create a Litter Control and Recycling Act. As in Washington State, the new act would establish "financial assessments on litter materials" and use the funds raised for education, clean-up and recycling. The levels of assessment would be based on criteria of degradability of materials and/or the levels of recyclability and recycling taking place. As a company achieved specified goals the level of assessment would be reduced. A two year grace period was proposed after the Act was proclaimed to allow manufacturers, distributors and retailers time to adjust. The Task Force also proposed that the Minister retain the authority to regulate packaging material and sizes.

There are numerous examples of excise taxes targetting specific materials or commodities to raise revenues. A contentious issue regarding such revenues is the degree to which they are used for specific applications or combined with general Government revenues. An application of the tax option that was particularly interesting to the Committee was the Nova Scotia proposal to directly incorporate an incentive to recycle. Such powers are included in the legislative bill introducing the Waste Reduction and Prevention Act in Manitoba.

In April 1989 the Manitoba Government established an Environmental Protection Tax through the establishment of a charge on the profits of the Manitoba Liquor Control Commission. This tax is being collected with the understanding that it will be used for "environmental protection initiatives"such as the Recycling Action Committee's operations.

Option 3: Charges on Difficult to Dispose of Materials.

Several products such as automotive tires, batteries and lubricating oils cause difficult disposal problems.

In landfills, waste tires have a tendency to float to the surface and break through the cover layer of soil. This disruption can allow water to enter and leach noxious materials out of the buried waste. If tires are stored on the surface in haphazard stockpiles they can create a fire hazard. As well they can provide a breeding ground for mosquitos by trapping rain water.

Waste motor oil is a potentially valuable commodity. The crude oils used for refining lubricating oils are relatively scarce, even compared to other crude oils. They have special physical and chemical characteristics which permit them to retain their value under harsh operating conditions. These oils become contaminated with additives, metals and sludges which can have significant environmental impact. Presently they are being dumped or recycled in low value and environmentally damaging methods such as road oiling for dust control and burning as a cheap space heating fuel. Neither of these uses is appropriate because of the environmental impacts.

Automotive batteries contain toxic materials, lead and acids, which have the potential to contaminate soil, water and foods. They can be recycled to recover valuable materials but the process is relatively costly given the workplace health and safety protection measures required and the cost of treating recycling byproducts such as acid and sludges.

These types of difficult to dispose of products are obvious targets for pre-disposal fees. The British Columbia Task Force has asked that a list of such products be developed and that appropriate fees be assessed. The revenues generated could be used to fund disposal and recycling services for these products. Some Committee members feel that such a step is needed in Manitoba while the industries in question develop their longer term waste minimization action plan.

Another question is how would such charges be introduced. The government has the power to implement the fee immediately and to let business adjust to minimize the payments required. An alternative would be to ask the affected industries to develop their own programs to combat litter. The fee would be assessed at some future time (perhaps in 12 months) on those industries not effectively combatting litter and waste. This idea would be most consistent with the long term approach suggested by the Committee and makes industry directly responsible for solving the problem.

Option 4: Pre-disposal fees or charges

Somewhat similar to a tax, a "predisposal" fee or charge differs in that there is a more direct link to the application of the revenues that are raised. Such an approach can be undertaken not only by Government. Producers or distributors themselves can set aside a designated amount per unit sale or in a set amount. Such an approach was followed voluntarily by the Crop Protection Institute of Canada on behalf of manufacturers of pesticide containers. An extra $1 a container was charged and held in trust to finance a program for their safe disposal. In August 1989 the Association for a Clean Rural Environment (Manitoba) was established by the Minister of Environment as a multi-stakeholder organization to oversee the program for spending the $750,000 that had been collected, and initiate other environmental programs.

Where this option may be deemed to be appropriate, but has not been instituted by producers and/or distributors, Government can implement it in a manner similar to taxation, with funds earmarked for particular applications. Such powers are included in the Waste Reduction and Prevention Act, to be considered for implementation when targets are not otherwise being met.

If the Government were to assess such levies on a generalized basis, a rebate of the levy could be used to provide additional incentive to undertake waste minimization and recycling action plans. For example, a rebate based on recycling could take the form outlined in the box below. The rebate would be calculated on the basis of recycling rates achieved in the previous business quarter.

EXAMPLE OF LEVY REBATES FOR RECYCLING ACHIEVEMENT

Recycling Rate	Tax Rebate
60%	40%
80%	70%
98%	100%

Option 5: Waste Disposal Charges - Provincial levy

Free disposal of waste, subsidized by municipal governments, is a real financial disincentive to encouraging the public and industry to get involved with waste reduction. It also represents a use of property taxes which encourages waste. Pressures on the property tax base encourage municipalities to operate waste disposal facilities at minimum compliance with environmental protection regulations. These pressures to operate at minimal levels merely defer paying for the problems associated with waste disposal to future generations.

Recommendations 37 and 38 would establish the power for municipalities to levy charges for waste collection, handling and disposal on the basis of waste generated and encourages the establishment of a more centralized and tightly managed waste disposal ground system.

A Provincial levy, in the order of $10/tonne could be established for garbage dumped at Waste Disposal Grounds and transfer stations equipped with scales. Such fees could be waived for source separated recyclable materials deposited in appropriate containers and wastes associated with recycling operations. An example is the residual waste produced by the metallic solid waste recycling industry that is not covered by pre-disposal fees or charges.

Funds raised in this fashion could be redistributed to municipalities and other proponents of waste minimization and recycling demonstration projects. The municipal representatives on the Committee expressed serious reservations about such a levy because they feel it would interfere with direct municipal expenditures to achieve waste minimization.

The funding options listed above do not represent a complete list of possible initiatives, but are ideas that have been introduced for discussion. The Committee looks forward to the public's input into this key question before developing specific recommendations.

IMMEDIATE ACTIONS

The Recycling Action Committee recognizes the need for immediate actions to respond to public expectations and to ensure that timely progress is made in achieving an ambitious 10-year goal.

While the basic strategy outlined in the Draft Action Plan is long-term, the following short-term options have been identified for further consideration:

Option 1 Setting accelerated short-term targets.

Option 2 Selective bans or restrictions such as restriction of designated materials from landfills (eg tires, batteries) or ban on disposable food service-ware for meals consumed in restaurants, cafeterias, licences premises and other food service establishments.

The Committee does not yet have a consensus on what should be given priority for immediate action. It is hoped that this subject will be discussed further at the Conserving Our Future conference in March.

Workshops designed to discuss Targets, Regulatory Options, Education & Awareness and Special Wastes and other topics have been scheduled. The tear-off sheets at the back of the Draft Action Plan provide a means for sending in comments on these options as well as on the recommendations in Sections 1 to 8.

The Committee looks forward to hearing the debate, as public input is an essential element in the development of the Action Plan to be submitted to the Minister of Environment in April.

TERMS OF REFERENCE

RECYCLING ACTION COMMITTEE

WHEREAS solid waste in Manitoba continues to increase at a rate far in excess of population growth;

WHEREAS only a limited number of recycling programs have been developed in Manitoba in response to the public's growing interest in recycling;

WHEREAS serious barriers such as weak markets for recyclable materials hinder the development of recycling programs;

THEREFORE, the Minister of Environment, under the authority of Section 5 of the Manitoba Environment Act, hereby establishes a Recycling Action Committee.

PURPOSE:

The general purpose of the Manitoba Recycling Action Committee is to develop a comprehensive strategy for promoting waste recycling in Manitoba. While the work of the Action Committee will primarily relate to activities in the City of Winnipeg and other urban centres, the intent is to develop strategies that will apply to all parts of the Province.

TERMS OF REFERENCE:

The Terms of Reference are as follows:

Investigating the Problem

1.To examine all aspects of recycling of specific waste materials (e.g. paper, glass, metals, plastics, oils, chlorofluorocarbons) and specific items (e.g. batteries, tires).

2.To examine the economics of recycling including strategies for addressing market barriers and revenue generation.

3.To summarize existing recycling programs in Manitoba and in other jurisdictions.

4.To identify information requirements to develop and implement a comprehensive recycling program (e.g. waste stream analysis).

IDENTIFYING SOLUTIONS

5.To examine the applicability and feasibility of recovering materials through such means as recycling depots, "blue box" program etc.

6.To review and make recommendations regarding recycling proposals submitted to the Department of Environment.

7.To make recommendations addressing infrastructure needs, market development and program implementation, including the identification of pilot projects to support the development of an expanded recycling program.

8.To examine possible employment opportunities, including those for the handicapped.

A CONSULTATIVE PROCESS

9.To ensure public involvement throughout the development of a recycling strategy for Manitoba and through consultations and meetings with the public, industry organizations, municipalities etc.

10.To oversee the organization of a Spring Symposium on Recycling.

11.To prepare a draft report for discussion at the Spring Symposium.

12.To prepare a final report following the Spring Symposium.

COMPOSITION:

The Action Committee is appointed by the Minister to represent a cross-section of organizations with a stake in addressing the issue of recycling wastes, including the environmentally concerned public, recycling industries, recycling associations, industry, municipalities and supporters of employment opportunities for the handicapped.

The Action Committee will be chaired by an independent chairperson appointed by the Minister.

To ensure departmental support for the Action Committee, the Committee vice-chairperson will be the Director of Planning, Research and Evaluation, Department of Environment,

STAFF SUPPORT:

The Department of Environment will provide technical and research staff to support the work of the Action Committee, as well as provide clerical support. The main functions of departmental staff will be to provide technical support, carry out research and pursue pilot projects as directed, and assist in the organization of the Spring Symposium. The Department will submit discussion documents to assist in the work of the Action Committee.

COSTS:

The Chairperson of the Action Committee will receive a stipend. The other members of the Committee (to a maximum of 18 members) will be reimbursed for expenses incurred at the rates as set out in the General Manual of Administration (not including salary) for attending meetings, participating in public consultations, and other activities associated with the work of the Action Committee.

MEETINGS:

The Action Committee will meet on a monthly basis (or as required) and provide the Minister with records of their meetings as well as monthly progress report.

MILESTONES:

-A discussion paper on recycling to be prepared by or under the direction of the Action Committee to serve as a catalyst for public consultations.

-A draft report for discussion at the Spring Symposium.

-Spring Symposium on Recycling.

-Final Report to Minister.

RECYCLING ACTION COMMITTEE MEMBERS

Chairperson	Vice-Chairperson
Dr. Robert Fenton	Mr. Jerry Spiegel, Director
University of Winnipeg	Manitoba Environment
Department of Economics	Planning, Research and Evaluation

Member	Representing
Mr. John Amor	PACKAGING ASSOCIATION OF CANADA
Ms. Joyce Agar	WESTMAN WILDERNESS CLUB
Mr. John Barker	MANITOBA ECO-NETWORK
Mr. Stuart Clark	MENNONITE CENTRAL COMMITTEE
Mr. Jim Ferguson	RECYCLING COUNCIL OF MANITOBA
Mr. David G. Henderson	WINNIPEG CHAMBER OF COMMERCE
Ms. Jenny Hillard	CONSUMERS ASSOCIATION OF CANADA
Mr. Tony Kuluk	CITY OF WINNIPEG
Mr. Jack Lazareck	CANADIAN ASSOCIATION OF RECYCLING
Mr. Lance Morrison	MANITOBA SOFT DRINK ASSOCIATION
Dr. Ian Rollo	MANITOBA ENVIRONMENTAL COUNCIL
Mr. Dave Shefford	THOMPSON INDUSTRIAL COMMISSION
Mayor Henry Wiebe	MANITOBA ASSOCIATION OF URBAN MUNICIPALITIES

The Committee would like to acknowledge the support of the staff of Manitoba Environment's Planning Branch...

Kathryn Hepburn, Donna Mekar, Debbie Sova, Ryan Kustra, Daryl Balasko, Linda Perry, Zenon Zalucky and the Recycling Coordinator, Rod McCormick

RECYCLERS IN MANITOBA

This is a draft list and additions or deletions are welcome

SCRAP METAL DEALERS:

Alpha Metals	3055 Day Street/Springfield	224-2989
Auto Rescue Auto Parts	325 Sutherland Avenue	633-1842
B & D Metals	207 Lowson/Tuxedo	489-2262
Big D's Scrap Yard	2000 Springfield Road	224-2700
Brandon Scrap Iron & Metals Ltd.	1st & Pacific/Brandon, Mb.	727-5779
Brokenhead Scrap Metal Co.	Beausejour, Manitoba	265-3405
Brunswick Enterprises Ltd.	125 Bismarck/Springfield	224-1472
Chisick Metal Ltd.	2141 Logan Avenue	632-1045
D C E Den-Ches Enterprises	Lot 118 Springfield Road	222-3226
General Scrap & Car Shredder	Springfield Road & Bismarck	222-4221
Industrial Metals Processing Ltd.	550 Messier/St. Boniface	233-1908
L & H Recycling	10 Charles Street	586-2708
Lazareck Bros Scrap Iron & Metal	Springfield Rd & Bismarck	222-4221
Logan Iron and Metal Co Ltd.	1021 Logan Avenue	774-2491
McPhillips Salvage Ltd.	222 McPhillips Street	774-3004
Melcan Industries	509 Harvard East/Transcona	224-4866
Monarch Metal Co.	8 Sutherland Avenue	943-7653
Orloff Scrap Metals	NW King & Sutherland Ave.	589-4303
Portage Scrap Metal Ltd.	350-14th St. N.E./Portage, Mb.	239-6371
Select Auto Sales	314 Dawson N./St. Boniface	237-4249
Tessler's Iron & Metal Co.	10 Charles Street	586-2704
Wesman Salvage	855-49th St. S.E./Brandon, Mb.	726-8080
Western Scrap Metals Inc.	18 Sutherland Avenue	947-0251
Yarmon Scrap Metal	749 Inkster Blvd.	589-1390

CORPORATE SPONSORED RECYCLERS:

Manitoba Soft Drink Recycling Inc.	1-20 Bentall Street	694-5349
Associated Beer Distributors	1400 Saskatchewan Ave.	775-9781
Deposit Soft Drink Bottles	Large Retail Grocery Stores	

CORPORATE RECYCLERS:

Canada Safeway Ltd.	313 Pacific Avenue	943-2636
Willpax	888 Bradford Street	772-5203
Frenscot	400 - C Turenne Street	786-6585
Can-Cell	14 Archibald Street	233-8526
Polo Paper Reclaim	743 Jarvis Avenue	586-2066
Cellufill	1373 Spruce Street	772-0950
Prime Motor Oil	415 Dawson Road	237-4013
Kemel Cartons (1973) Ltd.	684 Dufferin Avenue	586-5896
Welclad	515 Munroe Avenue	667-5060
Western Recycling	18 Sutherland	947-0251
Faroex	Gimli, Manitoba	

NON-PROFIT SECTOR:

Versatech Inc.	436 William Avenue	942-0727
Recycling Council of Manitoba	412 McDermot Avenue	942-7781
Resource Recovery Institute	51 Aikens Street	589-4088
Bridgestreet Enterprises	Virden, Mb.	748-1444
COR Enterprises Ltd.	364 Park Ave. E./Brandon	728-2932
ARC Industries	306 Jemima Street/Selkirk, Mb.	482-5435

SECOND-HAND SECTOR:

Thrift Shops

A Second Hand Boutique	125 Marion Avenue	233-8154
Econo Furniture	570 Selkirk Avenue	589-5409
Evans Consignment Centre	129-12th St./Brandon	725-2800
Ferdman Tool Supply	219 Logan Avenue	943-9157
Good Deal Furniture & Pawn Shop	569 Ellice Avenue	772-8880
Good Old Toys & Stuff	537 Sargent Avenue	772-7250
Goodwill Industries	70 Princess Street	943-6435
Jean's Consignment Boutique	677 Osborne Street	475-8485
Junior League of Winnipeg	776 B Corydon Avenue	474-2224
Ken's New & Used Furniture	629 Rosser/Brandon	727-2576
Lana Bain Antiques	763 Westminster Street	772-1574
Lutheran Goodwill	290 Bannatyne Street	942-3678
Morden Community Thrift Shop	484 Stephen/Morden, Mb.	822-3435
Morris Community Self Help Centre	162 Charles W./Morris, Mb.	746-2759

Peter's Auction Sales Ltd.	324 YoungStreet	783-1775
Pink Flamingo	651 Corydon Avenue	453-5570
Ray's Trading	620 Ellice Avenue	788-4829
Salvation Army Thrift Stores:	72 Martha Street	943-0478
	445 1/2 Watt Street	668-2595
	1406 Main Street	586-6930
	802 Sargent Avenue	783-6238
	1727 Pembina Avenue	261-2664
	145 Goulet Street	233-7897
	1438 Logan Avenue	783-6237
	406 Selkirk Avenue	589-4887
	3518 Roblin Blvd.	889-1018
	51 Main St./Flin Flon, Mb.	687-6200
Second Choice	101-100 Concordia Avenue	668-5739
Second Helpings	721 Osborne Street	453-3412
Sherbrook Thrift & Variety Shop	464 Sherbrook Avenue	783-9281
Starland Almost Anything Shop	626 Main Street	956-0062
Thrifty Tim's	Bonner & Highway 59	667-3957
West End Community Self Help Thrift and Gift Shop	859 Sargent Avenue	783-8185

Auto Parts & Supplies - Used & Recycled

Action Recycled Auto Parts Ltd	318 Logan Avenue	942-6406
Aime's Auto Parts	Perimeter & Sioux/St. Vital	257-0858
Anderson Auto Parts Ltd.	4000 Richmond E./Brandon, Mb.	727-5453
Auto Rescue Auto Parts	325 Sutherland Avenue	633-1842
Axion Auto	763 Tache Street	237-7079
Camden's Auto Wrecking	Southport/Portage, Mb.	428-3667
Day Auto Parts	2855 Day Street	222-3274
Economy Auto Parts	15 Charles Street	589-6097
Direct Auto Parts	RL 222 Headingly	888-0733
Great West Auto Parts Ltd.	33 Oak Point Road	633-1062
Merv's Auto Parts	1550 Springfield Road	222-1010
Minnedosa Auto Wreckers	Junction Hwy. 16 & 10/Minnedosa	867-3877
Moore's Auto Recycling	1525 Saskatchewan E./Portage, Mb.	857-3327
Kildonan Auto & Truck Parts	2850 Day Street	222-5245

Pick -A-Part	2075 Plessis Road	222-2711
Regent Auto & Truck Parts Ltd.	Springfield Rd. & Day Street	222-3291
Select Auto Parts	314 Dawson Road	237-4249
Wayne's Auto	176 Sutherland Avenue	942-2081

GOVERNMENT RECYCLING AGENTS:

Manitoba Hazardous Waste Management Corporation	226-530 Century Street	945-1844
Manitoba Waste Exchange	1329 Niakwa Road	257-3891
City of Winnipeg - Asphalt Plant	820 Elgin Avenue	986-5318

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